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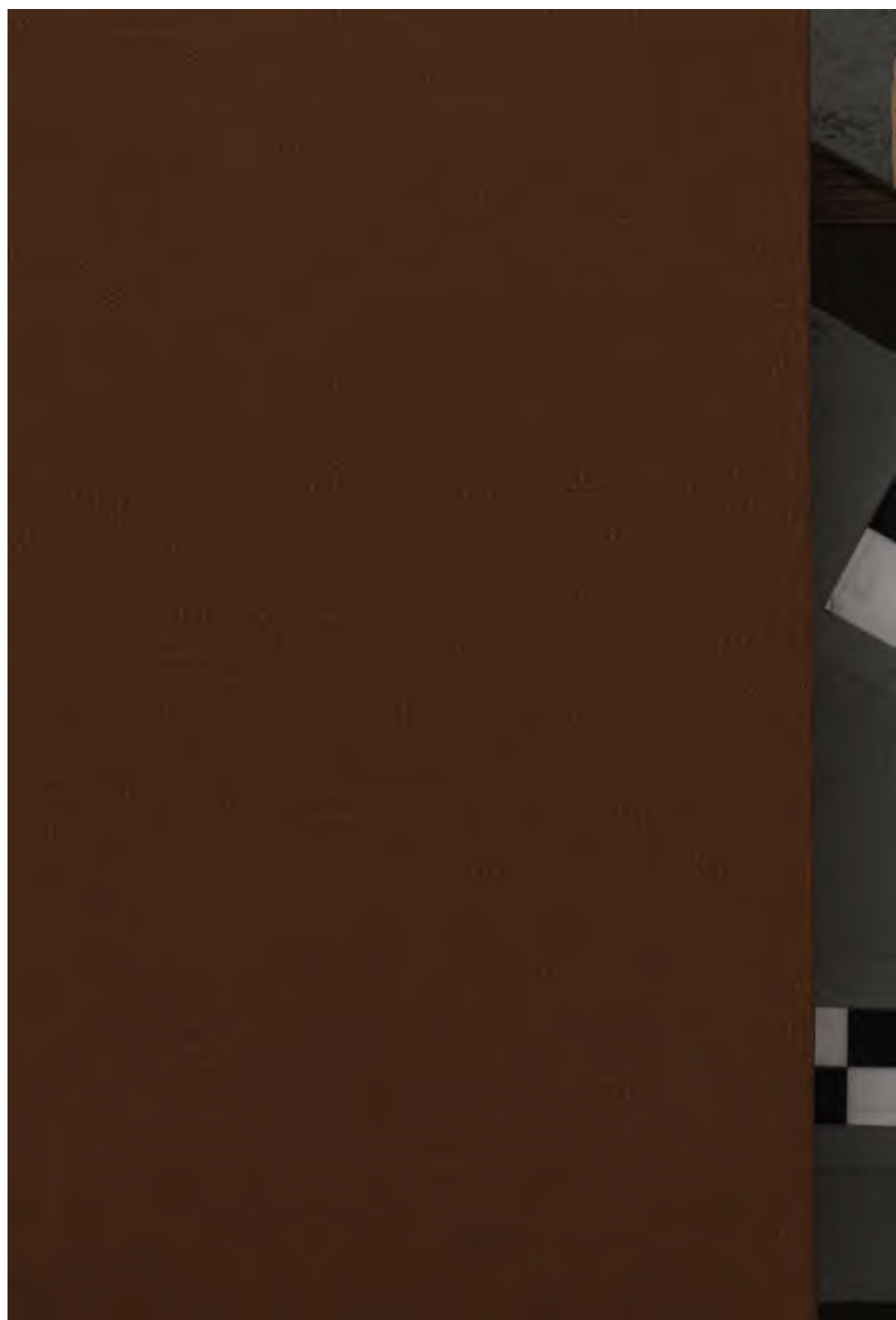
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ELEVENTH VOLUME.

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JOURNAL

OF THE

AMERICAN ORIENTAL SOCIETY.

ELEVENTH VOLUME.

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CONTENTS

OF

ELEVENTH VOLUME.

	Page
ART. I.—ON THE VERBAL ROOTS OF THE SANSKRIT LANGUAGE AND OF THE SANSKRIT GRAMMARIANS. By A. HJALMAR EDGREN, Instructor in Modern Languages in Yale College (Sheffield Scientific School). - - -	1
ART. II.—ON THE ACCENTUATION OF THE VOCATIVE CASE IN THE RIG- AND ATHARVA-VEDAS. By WILLABE HASKEIL, Ph.D., of New Haven. -	57
ART. III.—ON THE RELATION IN THE RIG-VEDA BETWEEN THE PALATAL AND LABIAL VOWELS (i, ī, u, ā) AND THEIR CORRESPONDING SEMIVOWELS (y, v). By A. HJALMAR EDGREN, Instructor in Modern Languages in Yale College (Sheffield Scientific School). - - - - -	67
ART. IV.—NOTICES OF FU-SANG, AND OTHER COUNTRIES LYING EAST OF CHINA, GIVEN IN THE ANTIQUARIAN RESEARCHES OF MA TWAN-LIN. By S. WELLS WILLIAMS, Professor in Yale College. - - -	89
ART. V.—INDRA IN THE RIG-VEDA. By EDWARD DELAVAN PERRY, Tutor in Greek and Latin in Columbia College, New York. - - -	117
ART. VI.—THE CYPRIOTE INSCRIPTIONS OF THE CESNOLA COLLECTION IN NEW YORK. By Prof. ISAAC H. HALL, of New York City. - -	209
ART. VII.—ON THE PROFESSED QUOTATIONS FROM MANU FOUND IN THE MAHABHARATA. By EDWARD W. HOPKINS, Instructor in Columbia College, New York City. - - - - -	239
ART. VIII.—THE ARABIC BIBLE OF DRS. ELI SMITH AND CORNELIUS V. A. VAN DYCK. By Prof. ISAAC H. HALL, of New York City. - - -	276
ART. IX.—ON A MANUSCRIPT SYRIAC LECTIONARY. By Prof. ISAAC H. HALL, of New York City. - - - - -	287
ART. X.—THE UNAUGMENTED VERB-FORMS OF THE RIG- AND ATHARVA-VEDAS. By JOHN AVERY, Professor in Bowdoin College, Brunswick, Me.	326

	Page
ART. XI.—THE NORTHERN BARBARIANS IN ANCIENT CHINA. By W. A. P. MARTIN, President of Tung-wen College, Peking, North China.	362
ART. XII.—ON THE POSITION OF THE VAITANA-SUTRA IN THE LITERATURE OF THE ATHARVA-VEDA. By MAURICE BLOOMFIELD, Professor in the Johns Hopkins University, Baltimore, Md.	375
ART. XIII.—THE GREEK STAMPS ON THE HANDLES OF RHODIAN AMPHOREÆ, FOUND IN CYPRUS, AND NOW IN THE METROPOLITAN MUSEUM OF NEW YORK. By Prof. ISAAC H. HALL, of New York City.	389

Proceedings of the Society, October, 1878. i

PRINCIPAL CONTENTS: Sepulchral monuments of So. India, J. Avery.—Tentative linguistic forms, C. R. Lanman.—Female education in China, S. W. Williams.—Dispersion of the Semitic peoples, T. C. Murray.—Relation in the Rig-Veda between the *i*- and *u*-vowels and their semivowels, *y*, *v*, A. H. Edgren.—Vedic compounds with genitive as prior member, M. Bloomfield.

Proceedings of the Society, May, 1879. vi

Elision of *a* after *e* and *o* in the Vedas, J. Avery.—Copper stamp with Greek inscription, F. P. Brewer.—Pre-historic revelations among the Nile-dwellers, T. O. Paine.—Contest between Bel-merodach and the dragon, W. H. Ward.—Recently discovered Hittite inscriptions, W. H. Ward.—Use of gold and silver among the Assyrians, S. Merrill.—Analysis of the *Rei-gi rui-ten*, G. Attwood.—Darmesteter's Ormuzd and Ahri-man, J. Luquiens.

Proceedings of the Society, October, 1879. xiv

The *Lieh-Kwoh Chi*, S. W. Williams.—Dragon and serpent in Chaldean mythology, W. H. Ward.—Certain points in Sanskrit Grammar, W. D. Whitney.

Proceedings of the Society, May, 1880. xxi

Notice of the death, and bequest to the Society, of Dr. J. P. Thompson.—Palestinian archaeology, S. Merrill.—True site of Nineveh, P. C. Bliss.—Index Verborum to the Atharva-Veda, W. D. Whitney.—Method and processes of comparative mythology, J. Luquiens.—Catalectic Vedic verses of seven syllables, C. R. Lanman.—Noun inflection in the Sabeian, C. H. Toy.—A certain phonetic change in Zend, J. Luquiens.—Rules of external combination in Sanskrit, W. D. Whitney.

Proceedings of the Society, October, 1880. xxxv

The obelisk in the New York Central Park, G. Seyffarth.—The worship of ancestors in China, W. A. P. Martin.—Syriac versions of Luke xxiv. 32, I. H. Hall.—External vowel-combination in Rig- and Atharva-Vedas, W. D. Whitney and W. Haskell.—Chaldean seals, W. H. Ward.—Greek inscription from Beirût, I. H. Hall.—The *Ikhwan as-Safa*, A. Huebsch.—A manuscript Syriac lectionary, I. H. Hall.—Chinese accounts of Fu-

sang etc., S. W. Williams.—Indra in the Rig-Veda, E. D. Perry.—Reformed Buddhism in China and Japan, W. A. P. Martin.—Tibetan Sûtra in forty-two chapters, W. W. Rockhill.—The transliteration of Sanskrit, W. D. Whitney.

Proceedings of the Society, May, 1881. - - - - - lv

A Hebrew charm from Jerusalem, I. H. Hall.—Edition of the Avestan Gâthâs, L. H. Mills.—Guyard's theory of Semitic internal plurals, C. H. Toy.—Darmesteter's translation of the Vendidad, J. Luquiens.—Metres of the Rig-Veda, W. Haskell.—Sânkhya philosophy, C. C. Everett.—Relative clauses in the Rig-Veda, J. Avery.—The Mahâyâna school of Buddhism, W. W. Rockhill.—Lepsius's views of African languages, W. D. Whitney.—Fragment of the Samaritan Pentateuch, I. H. Hall.

Proceedings of the Society, October, 1881. - - - - - lxxi

Delitzsch on the site of Eden, C. H. Toy.—Non-diphthongal *e* and *o* in Sanskrit, M. Bloomfield.—The Miao-tsz' tribes of China, and the Nestorian tablet, S. W. Williams.—The so-called henotheism of the Veda, W. D. Whitney.

Additions to the Library, July, 1878—December, 1881. lxxxiii

Proceedings of the Society, May, 1882. - - - - - cv

The Kushites, C. H. Toy.—The cosmogonic hymn, Rig-Veda x. 129, W. D. Whitney.—A royal leper, W. Butler.—God and the soul among the Nile-dwellers, T. O. Paine.—De Harlez's Avesta, J. Luquiens.—The rude tribes of N. E. India, J. Avery.—Verb-supplement to his Sanskrit grammar, W. D. Whitney.—Metres of the Rig-Veda, W. Haskell.

Proceedings of the Society, October, 1882. - - - - - cxxi

Words for color in the Rig-Veda, E. W. Hopkins.—Syriac miscellanies, I. H. Hall.—Vedic differences of use in present-systems from the same root, M. Bloomfield.—The cylinder inscription of Assurbanipal, D. G. Lyon.—Readings of the Vatican MS. of the New Testament, C. Short.—Rejoinder to the counter-criticism of M. de Harlez, J. Luquiens.—Eggleling's translation of the Çatapatha-Brâhmaṇa, W. D. Whitney.

Proceedings of the Society, May, 1883. - - - - - cxxxvii

Greek inscription found at Gerash, T. O. Paine.—The site of Pithom, L. Dickerman.—Japanese *nigori* of composition, B. S. Lyman.—The Oriental genius, J. W. Jenks.—The Jâiminiya- or Talavakâra-Brâhmaṇa, W. D. Whitney.—Modes in relative clauses in the Rig-Veda, J. Avery.—Irregular Vedic subjunctives or imperatives, M. Bloomfield.—Was there a god El at the head of the Babylonian Pantheon? D. G. Lyon.—The bronze-crab inscription of the New York obelisk, I. H. Hall.—Peking pronunciation of Chinese, B. S. Lyman.—Two Buddhist Sûtras from the Tibetan, W. W. Rockhill.

Proceedings of the Society, October, 1883. - - - - - clxv

Phœnician inscriptions of the Cesnola collection in New York, I. H. Hall.—A temple of Zeus Labranios in Cyprus, I. H. Hall.—Proposed edition of the Kauçika-Sûtra, M. Bloomfield.—The Siamese language, S. C. George.

—The Khasi language, J. A very.—Egyptian and Old-Babylonian theories of the Phœnician Alphabet, J. P. Peters.—The Arabic Bible of Drs. Smith and Van Dyck, I. H. Hall.—The Nandinī commentary to Manu, E. W. Hopkins.—Professed quotations from Manu in the Mahābhārata, E. W. Hopkins.—The various readings of the Sāma-Veda, W. D. Whitney.

Proceedings of the Society, May, 1884. - - - - clxxxvi

Notices of the deaths of Professors S. Wells Williams and Ezra Abbot.—Cippus from Tarsus with Greek inscription, I. H. Hall.—A Shapira-Roll in Philadelphia, I. H. Hall.—The stanza Rig-Veda x. 18. 14, C. R. Lanman.—Dialectic equivalence of *sh* and *n* in Proto-Babylonian, C. F. Lehmann.—The Dātavya Bhārata Kāryālaya in Calcutta, C. R. Lanman.—Unaugmented verb-forms in the Rig- and Atharva-Vedas, J. A very.—The Study of Sanskrit and of the Hindu grammarians, W. D. Whitney.—Cypriote inscriptions in New York, I. H. Hall.—The northern barbarians in ancient China, W. A. P. Martin.

Proceedings of the Society, October, 1884. - - - - cciii

Origin of the Chinese and Korean writing, D. B. McCartee.—A cursive MS. of the Greek Gospels, I. H. Hall.—Hieroglyphic evidence of the extent of Lake Mæris, F. C. Whitehouse.—The Tibetan "Hundred-thousand Songs" of Milaraspa, W. W. Rockhill.—The Book of Hierotheus, A. L. Frothingham, Jr.—The identity of Zoan, F. C. Whitehouse.—Cuneiform inscriptions of Western Asia, D. G. Lyon.—Classification of certain Sanskrit aorist-forms, W. D. Whitney.—A Syriac MS. of the Acts and epistles, I. H. Hall.—Position of the Vāitāna-Sūtra, M. Bloomfield.—Use of *asah* in the Bible, C. Adler.—Requirements for printing Sanskrit in transliteration, C. R. Lanman.—Meaning of *Baalim* and *Ashtaroth* in the Old Testament, A. L. Frothingham, Jr.—Etymology of the Sanskrit noun *vratī*, W. D. Whitney.

Additions to the Library, January, 1882—May, 1885. ccxxxii

List of Members, May, 1885. - - - - ccxli

NOTE.—Pages cl.—clxiv. are wrongly numbered, as clx.—clxxiv.

ARTICLE I.

ON THE

VERBAL ROOTS OF THE SANSKRIT LANGUAGE AND OF THE SANSKRIT GRAMMARIANS.

By A. HJALMAR EDGREN,

INSTRUCTOR IN MODERN LANGUAGES IN YALE COLLEGE (SHEFFIELD SCIENTIFIC SCHOOL).

Presented to the Society May 29th, 1878.

THE object aimed at in this paper has been a separation of authenticated and unauthenticated verbal roots or root-forms in Sanskrit; a general classification and description of the former, and an attempt at determining the value and the character of the latter.

It is a recognized fact that the majority of Sanskrit radicals enumerated by native lexicographers and grammarians have never been verified by modern investigation of the literature of the Hindus. Different causes have been assigned to account for this fact. Some scholars have expressed a suspicion that at least a considerable portion of these strange forms are counterfeits—products of scholastic inventiveness, which have never entered into circulation in the living language. But others, and, it is believed, with the weight of authority on their side, have trusted to the disclosures of a more thorough sifting of all the material for the justification of such forms; or have made dialectic variations and borrowing from unrelated tongues responsible for these pariahs rejected by classical records.

Another fact is also that not only a great number of these problematical root-forms, but also a great many authenticated radicals, are invested with meanings which have never been recognized by modern researches. This also must be due to one of two causes: either to mere invention or guessing on the part of the native lexicographers and commentators, or else to the existence of parallel radicals, identical in their form, but differing in their signification.

This whole subject seems, for two reasons, to deserve especial attention. The first and more general reason is the importance, in Indo-European etymology, of the evidence furnished by Sanskrit roots. The value of their testimony is in exact proportion to their authenticity. Indications are by no means wanting that etymologizers are tempted to lend an undue, indeed often a fallacious, importance to doubtful forms, in allowing them to stand at the side of authenticated roots, as their full equals, supporting far-reaching conclusions: and it might be said with truth that the structure of Indo-European etymology, in so far as it is reared on such foundations, is loose and unsafe. The second and more special reason is the desirableness of facilitating a correct acquisition of the language by disencumbering the dictionaries of what is false, and thus misleads or unnecessarily burdens the memory of the student.

The great dictionary of Böhtlingk and Roth, which determines the value of every root-form as far as the present knowledge of the language permits, and which, no doubt, will for years to come be the corner-stone of all etymological constructions on the Aryan field, will, we hope, some day yield a satisfactory solution of the enigma of these unidentified roots and definitions. In the mean time, the following facts, mainly drawn from that source, and the conclusions founded on them—conclusions given with all the caution which the consideration of a subtle and elusive question has constantly suggested—may serve as a slight contribution to such a result, if only by inviting to the subject a wider discussion than it has hitherto received.

THE AUTHENTICATED VERBAL ROOTS AND ROOT-FORMS.

By authenticated radicals is here meant all such as, given or not given in native root-collections, especially in Pāṇini's Dhātupāṭha, and further explained or illustrated by native commentators, have been actually found in any personal or impersonal form by modern researches in the Hindu literature. All forms not thus verified have been ruled out, whatever, in other respects, their claims might seem to be.

THE NUMBER AND CLASSIFICATION of these authenticated radical forms must vary according to different methods followed. In the first case a very large number of radicals catalogued in the

¹ About fifty forms, found especially in the Rig-Veda, are wanting in Westergaard's *Radices Ling. Sanscr.* [*āikk* (denom. ?), *ar* (?), *dr*, *āikk* (*uikk* given), *katt*, *ka* (= *ka*), *kraksh*, *kshup*, *khud*, *gad*, *gulph*, *gushp*, *gūrdh*, *janh*, *jajhjh*, *dam*, *tanā*, 1, 2 *tu*; *trut*, *trud*, *dan*, *dudh*, *dhav*, *nid*, *paj*, *palpāl*, *pidā*, *bhan*, *bhishaj*, *bhar*, *bharaj*, *majj*. (Dhāt. under *nasj*), *man*, *migh* (= *mih*), *myaksh*, *yād*, *rapc*, *rip*, *red*, *lam*, *vat*, *vid*, *vrād*, *vrādā*, *vikāṅg*, *cat*, *cuj*, *cush*, *hru*.]—Many more, though found in one sense or inflection, have others which necessitate their classification as separate roots (as 2 *arj*, 2 *ah*, 2 *uksh*, 2 *can*, 2 *dā*, 4 *vas*, 2 *sarj*, 2 *har*, etc. etc.); or have meanings entirely different from those given by the natives.

Dhātupāthas are only convenient duplicates of one and the same root, parallel forms corresponding to slight inflectional changes or varieties which involve no change of sense whatever; as in the case of *dā, dad, dāy; dhā, dudh; i, ī, ay; vip, nep*; the frequent nasalization of roots like *badh, bandh; gubh, gumbh; saj, sañj* (also *sajj*, by assimilation); and so on. If all such possible variations were taken into account, the root-list would be increased beyond endurance. In point of fact it is considerably swelled by these parallel forms, without beginning to exhaust the possibilities; and, moreover, the number varies somewhat according to the method of different lexicographers (European included). The following collection of verified root-forms (in the main though not absolutely agreeing in arrangement with that of the Dhātupātha) contains not less than 108 duplicates of the above description (not counting such as *kar, kṛ*, since they are not given separately in the Dhāt.). To these may be added *kar, khid, 2 tan, paç, stan, spaç*, and implying no organic change or change followed by modification of the meaning, but only a wearing away of the initial consonant. Aside from these 112 duplicates, then, there are altogether 880 radical forms which are authenticated on the principle laid down above.

But, secondly, even these 850 forms must be considerably reduced in number before we have what may be fairly called radicals. There are many forms which, in all probability, must be considered as denominatives, and which, as such, have no more right to occur in a root-collection than other and more evident denominatives, which are excluded from it. It cannot, indeed, be stated with absolute certainty which forms are denominatives; and probably the weight of the best authority is now in favor of the supposition that all verbs of the *cur*-class were ultimately of that kind. Without resorting, however, here to this theory, and classifying as denominatives, for the most part, only such verbs as seem clearly derived from existing nominal bases both in form and sense, and whose late occurrence in the language, moreover, gives strong support to this theory of secondary formation, a number of 48 is obtained. They are (only the 7 marked † occurring also in the RV.): *añs, añk, añkh† (?), argh, arth†, īrshy, kath, kīrt, kuts, khand, gañ, gand, gupt, cūrñ, tīr, dañd, dhāp, 2 pat†, path, 2 paç, pāl, piñd, 2 phal, phull, mantr†, mṛg†, mārg, miçr, māl, 2 moksh, yantr, 2 ras, rūksh, rūp, luksh, liñg, varñ, vāt, vās, vīrt, vyay, vran (?), çabd, çil, sabhāj, sukh, sātṛ, sten*, (compare also *nīd*).

Further, there are a few forms which are apparently nothing but (for the most part older and somewhat anomalous) derivative verb-forms (mainly desideratives) from roots existing at their side; and with which, like other more regular derivatives of the kind, they might be properly classed. There are about 16 of them, viz.: *kāñksh* (desid. of *kam*), *kshal* (caus. of *kshar*), *2 kshap* (caus. of *kshi*), *jāgar* (intens. of 3 *gar*), *daridrā* (intens. of *drā*),

diksh (desid. of *daksh*), *dhiksh* (desid. of *dih*), *dip* (caus. of *di*), *pār* (caus. of *par*), 3 *badh* (desid. of *bād*), *bhiksh* (desid. of *bhaj*), *mīksh* (desid. of *miṣ* or *miḥ*), *moksh* (desid. of *muc*), *śān* (desid. of *cā*), *hīns* (desid. of *han*), *ārnu* (fr. *var*, *vr̥noti*); [compare also a few less certain as *aksh* (*aṣ*), *naksh* (*naṣ*), etc.].

Subtracting the preceding 64 forms from the number 880, there remain 816 radical forms.

Though these figures represent the number of identified radical verb-forms with an independent character and with their own distinct meanings or shades of meaning, it is nevertheless generally conceded that many even of them are but the results of older processes of linguistic change, and that not a few among them are referable to simpler or more primitive roots, which are yet extant. Still the nature and scope of these processes are very differently interpreted, and the classifications, as a consequence, very diverse and uncertain.

In a limited number of cases, indeed, we need feel little or no hesitancy. Thus, especially, there are some radicals like *ramb*, *lamb* (both meaning 'hang down,' but the former occurring only in its literal sense in the R̥g-Veda, while the latter, with various figurative meanings attached to it, occurs in the later language alone), or *bhan*, *bhan* (the former 'resound, shout,' and Vedic; the latter 'speak,' and post-Vedic) of which *lamb* and *bhan* are evidently nothing but later forms of *ramb* and *bhan*. Such couplets, involving no addition or loss of consonants, and no vowel-change, are in fact but one root, and might conveniently be so given, were it not that they often show different shades of meaning, giving rise to different derivations, and that they occur in different epochs, the more original forms generally alone in the Vedic period, and the later forms (mostly alongside the earlier) in a later stage of the language. On these grounds they are justly held apart, being in fact separate forms; only where the preceding distinctions are wanting have they been counted as one. Omitting, of course, the frequent interchange between *v* and *b*, which is optional rather than historical, there are altogether 27 such slightly varied radicals, for the most part on the *r-l* theme, viz.: *lañgh* (*rañh*, *rañgh*), *lap* (*rap*), *labh* (*rubh*), *lam* (*ram*), *lamb* (*ramb*), *las* (*ras*), *likh* (*rikh*), *lip* (*rip*), *liṣ* (*riṣ*), *lih* (*rih*), *luḍ* (*lul*), *lup* (*rup*), (*kshal*, caus. of *kshar*), *cal* and *ṣul* (*car*), *jval* (*jvar*), *dal* (*dar*), *phal* (*phar*), *sphul* (*sphur*), *hval* (*hvar*), *plu* (*pru*), *mluc* (*mruc*), *clath* (*crath*), *clish* (*crish*); *bhan* (*bhan*), *ut* (*at*); *har* (*bhar*), *ruh* (*rudh*).

There are also some, like 1, 2 *kal*, 1, 2 *karsh*, etc., which are identical in form, but which follow different inflectional systems, and which have generally developed more decided changes of meaning. It has seemed preferable, however, for various reasons, to arrange such forms, in the list which follows, under one head, wherever the kinship of meaning seemed to argue convincingly an ultimate identity; and to leave those subject to more uncertainty to be separated, merely suggesting their relationship.

Reducing again the number 816, which was left above, by the 27 historically modified forms, there remain 789 radicals, which may be considered as either entirely distinct roots, or secondary formations chiefly by means of accretion, or vowel-change and transposition, outside any of the ordinary grammatical processes.

The classification of the greater part of these root-words is necessarily fraught with much uncertainty; and it is here that individual feeling and theorizing, mostly unsupported by direct historical evidence, have established very different principles, and arrived at very diverse results. Leaving entirely to their worth such bold classifications as those attempted by Fick, on the one hand, and by Pott and others, who resort to the prefix-theory (for an anomalous exception comp. *uji*), on the other, and building mainly on the principles cautiously and guardedly laid down by Curtius in his *Grundzüge der Griechischen Etymologie* (pp. 58–72, 4th ed'n), a tolerably correct, though no doubt very incomplete grouping may be obtained. According to these principles a change of roots has taken place, on some principles not yet understood, chiefly by the suffixing of certain consonants, more seldom by a vowel-change, and very rarely by a loss of prefixed consonants.—The last change not being organic, or, as Curtius calls it, a *Wurzelaffectio* and not a *Wurzelvariation*, has been treated above (p. 3).—

Thus it seems reasonable to suppose that couplets or groups of radicals like *i*, 'go,' *in*, 'cause to go;' *ci*, 'observe,' *cit*, 'observe, know,' *cint*, 'think, reflect upon;' *gar*, 'raise the voice,' *garj*, 'bellow, roar;' *si*, 'bind,' *siv*, 'bind together, sew;' *mar*, 'grind, crush,' *marn*, 'crush,' *marḍ*, 'grind, crush,' *marc*, 'hurt'—and others of a similar character, are closely akin. And when, further, we consider the prevailing tendency of Indo-European roots to growth by means of suffixes, and that the more original meaning can be traced in most cases, though not in all, to the simpler form, it is natural to assume that the longer forms of the preceding examples are later developments of the shorter, by means of the consonantal suffixes, *n*, *t*, *j*, *v*, *d*, *c*.

When, again, we meet with pairs like *pā*, 'drink,' *pī*, 'drink;' *sādh*, 'accomplish,' *sidh*, 'be accomplished;' *raj*, 'be bright,' *rāj*, 'shine,' and so on,—we cannot forbear to consider the latter forms as weakenings or strengthenings of the former, and thus to admit vowel-change as instrumental in this root-variation.

Finally, such similar forms as *man*, 'think,' *mnā*, 'think;' *par*, 'fill,' *prā*, 'fill;' *gar*, 'swallow,' *gras*, 'swallow;' *jar*, 'move near,' *jri*, 'move'—evidently show a kinship: be it that the variation of form was caused by metathesis; or, as argued recently by Dr. Brugman (*Morphologische Untersuchungen*, I.), by means of a vowel-suffix [*prā*=*p(a)r+ā*].

Adhering in the main to these three principles (exceptionally an infix, and in two or three cases a prefix, being allowed), 156 forms have been judged to be such derivatives from simpler and more primitive radicals. It should be remarked, however, that

most (about 110, comp. p. 7) of these presumable branch-roots appear side by side with their stems in the earliest monuments of the language, and that a great part of them are shown by corresponding forms in other cognate languages to have existed before the separation of the common primitive speech into its branches. If these 156 conjectural—and no doubt, on the whole, real—root-derivatives of extant roots be subtracted also from the sum 789, which remained above, we arrive at a total of 633. This may be considered as a moderate estimate of all genuine Sanskrit roots which are really independent, in so far as, though sometimes related, they are not derived, directly or indirectly, from one another.

But not only do a great many of these independent roots bear traces of secondary foundation, though the more primitive form is lost or unauthenticated, but several of them are so similar in both form and sense, that they appear to be varied developments of some lost elementary root, or otherwise kindred forms. Thus, for instance, we have beside *kamp*, 'tremble,' *kup*, 'be stirred or excited' (to which two forms an original *kap* is wanting); beside *kan*, 'be pleased, love,' *kam*, 'love;' beside *nad*, 'sound,' *nard*, 'roar;' beside *jabh*, 'snap at with the mouth,' *jeh*, 'gape' (by Benfey wrongly, as it seems, considered to be an intens. of *hā*); and so on. It is often a matter of great difficulty to draw the line between these indirectly kindred radicals and those treated above; and it has seemed preferable, in the appended classification of root-forms, to arrange all evidently kindred ones together. By this means a list of 587 roots and groups of related root-forms is obtained.

It must be remembered, however, that this classification nowise aims at being exhaustive. It only seeks to bring together tentatively those forms which have seemed to bear more evident traces of kinship, leaving all that seemed too uncertain, by formation or meaning, to stand by themselves. There is no doubt that a more rigorous dealing with the subject would considerably reduce this number, for much latitude may be indulged here, but it would also, in so uncertain a field, be subjected to many doubtful and erroneous inferences, a danger which even so general a grouping as this cannot hope to have entirely escaped. Such obscure questions as whether *jñā*, 'know,' comes from *jan*, 'bear, be born,' or *man*, 'think,' from *ma* (*mā*), 'form or measure,' though occasionally noted, have not been considered in the arrangement. Various forms like *tud*, *tuj*, both meaning 'push,' *śuc*, *śudh*, both meaning 'shine,' though they may be originally akin, have also been left separated, in the absence of a common *tu*, *śu*. Further, *var* and *val*, 1, 2, 3 *cam* (all connected by Fick), etc., have been left separated for want of any closer connection in their meanings. It has seemed preferable, in regard to such forms as the above, to assume the possibility of their independent coexistence, rather than to follow a sweeping theory of reduction. Scarcely any account has been taken of prefixed consonants

though it seems to be not without significance that occasionally words occur with kindred forms and meanings like *am*, *kram*, *dram*, *bhram* for motion, *tan*, *kvaṇ*, *dhvan*, *bhan* (*bhan*), *man* (?), *ran* (*raṇ*), *svan* for sound, and some others less numerous. In some exceptional cases a deviation from a more generally accepted etymology has been ventured on. Thus the theory, apparently supported by cognate languages, that *bhā*, 'shine,' and *bhan*, 'speak,' belong to an original *bha*, 'speak, shine,' has not been followed, for various reasons. The alleged support of that theory by other Sanskrit roots which have the same two meanings is of a very dubious character, inasmuch as those other forms (not less than 38) are all, with one single exception, unauthenticated, and the definitions, as will be shown further on, probably artificial. The one authenticated exception is *las*, which is found both in the sense of 'shine' and 'sound,' and is by the Petersburg Dictionary given as one root. But it seems more probable, after all, that *las*, 'sound,' is but a later form of *ras*, 'give forth any loud sound, roar,' etc. (comp. old *bhan*, 'resound, shout'); and which *ras* never means 'shine.' To this should be added, however, *caśh*, which, though not meaning 'shine,' is found in the sense of 'be visible, appear; announce, say' (Petersb. Dict.); and which is derived from *kāśh*, 'shine.' It seems as if here the meaning 'announce, say' (found chiefly when the root is comp'd with *ā*, *praty-ā*, etc.) had been developed causatively through 'make apparent, etc.' As regards the root *bhan* (*bhan*), on the contrary, its earliest (Vedic) sense appears to be 'resound, shout,' not 'speak,' and this latter (post-Vedic) meaning therefore to be directly derived more naturally from the idea of *sound*. Besides *bhan* (*bhan*) seems in some way, if only by analogy, to connect itself with a number of roots in *-an* (see above), meaning 'sound.' Why not accept two different elements as well for *bhā*, *bhan*, as for the kindred verbs *φαίω*, *φημί* in Greek? The remarkable alternative coincidence of lengthened vowel and nasalization might be accidental, and is not found in other kindred tongues.

THE OCCURRENCE of the authenticated radicals and radical derivatives is as follows. Of the 832 forms which remain after the merely graphically different ones and the denominatives have been deducted 528 occur in both the Rīg-Veda and the other literature.¹ Of the remaining 304 forms, 62 occur in the Rīg-Veda alone (4 others in the Atharvan alone, see note below):

ār, *ij*, 2 *uksh*, *gadh*, *gārdh*, *jajhjh*, *jañj*, 2 *jar*, 3 *jar*†, *ji*, *jūrv*, *jeh*, *jri*, *tak*, 2 *tan*†, *tand*†, *turv*, *tuç*, *tvuksh*, *dan*, *dāç*†, 3 *dī*, *dudh*, *dra*, *dhan*, *dhav*, *dhraj*, *nas*, *nīns*, *nīd*, *paj*, *praksh*, *phar*, *bhan*, *bhand*†, *bharv*, *bhishaj*, *bhur*, *bhuraj*, *bhrī*, *bhresh*†, *myaksh*, *yād*, *rapç*, *raph*, *ramb*†, *rikht*, *ript*, 1 *rudh*†, *vakt*, 2 *vuksh*, *vat*, 4 *vas*, *vrud*, *vrādh*, *vlag*, *çcam*, *çār* (?) *çardh*, *çuj*, *çrush*, *sridh*.

¹ The following 26 radicals occur in the Atharvan, but not in the Rik (only 4, thus marked, in the Atharvan alone): *art* (AV. alone), *il*, *kash*, *kāj*, *kshan*, *kshubh*, *gad*, *cal*, *cešt*, *chā*, *ivar*, *īdv* (? AV. alone), *psd* (AV. alone), *bhds*, *miv*, *mārçh*, *mruc*, *rup*, *lap*, *ikkh*, *lup*, *valç*, *vik*, *çat*, 1 *çad*, *has* (AV. alone).—Some other Atharvan roots occur in the Rik in a participial form only.

Of these 62 there are 11 (marked †), however, which have derivative words in the later language; and others appear to be secondary forms of also post-Vedic roots, viz.: *ij* (=ej), *jeh* (*jabh*), *jūrv* (*jvar*), *dudh* (*dhā*), *dhan* (*dhanv*), *bhresh* (*bhrañç*?), *yād* (*yā*). On the whole, therefore, there are but 44 radicals which belong exclusively to the earliest Vedic period, and have no connection with the later literature.

The following list contains the remaining 242 forms which do not occur in the Rig-Veda (those 26 found in the Atharvan, however, are so marked):

Forms with an *l*-sound, 1 *kal*, 2 *kal*, *klath*, *klam*, *klid*, *kliç*, *kshal*, *kshvel*, *khel*, *gal*, *galbh*, *cal†* (AV.), *jalpt†*, *jval*, *tul*, *dal*, *dul*, *palpūl*, *plush†*, *phat*, *bal*, *bhal*, *il* (AV.), *mīl*, *mlech*, *lag†*, *lañgh*, *lajj*, *lup* (AV.), *lam*, *lamb*, *lal*, *lash*, 1 *las*, 2 *lus*, *lā*, *likh* (AV.), *liç*, *lih*, *li*, *luñc*, 1 *luth*, 2 *luth*, *lunth*, *lud*, *lup* (AV.), *lul*, *lū*, *lok*, *loc*, *val*, *valgt†* (AV.), *valh*, *vli* (AV.), *çal*, *çlath*, *çlāgh*, *çlish*, *skhal*, *sphal*, *sphul*, *hlād*, *hval†*:—with a lingual mute or nasal, *at*, *katt*, *kutt*, *kunth*, *kūn*, *krād*, *kvan*, (=kshan), *kshvid*, *gunth*, *gha(n)†*, *ghatt*, *ghut*, *ghārñ*, *cat*, *cesht†* (AV.), *jhat*, *tuñk*, *dam*, *damb*, *dī*, *dhauk*, *tat*, *nat*, *pat*, *path*, *pan†*, *bhat*, *bhan*, *man*, *mand*, *mred*, *rat*, *ran* (=ran), *red*, *ruth*, *vesht*, *vran*, *vrid*, *vrud*, *shiv*, *sphat*, *sphut*, *hind*, (+ 1 *luth*, 2 *luth*, *lunth*, *lud* from the *l*-series):—terminating in a palatal, *āñch*, *arj*, *ujj*, *uñch*, *ku(ñ)c*, *khac*, *khañj*, *garj*, *guñj*, *cañc*, *carc*, *tañc*, *tarj*, *pūj†*, *march* (?), *mārçh* (AV.), *mruc* (AV.; RV. verbal), *vij*, *sūc*, *hurch* (+ *kliç*, *mlech*, *lajj*, *liç*, *luñc*, *loc* from the *l*-series):—others, *añgt†*, *art†* (AV.), *katth*, *kampt†*, *kush* (AV.), *kāñksh*, *kuth*, *kush*, *kū†*, *kūj* (AV.), *kārd*, *knūy*, *krath*, *kvath*, *kshan* (AV.), *kshap*, *kshup*, *kshubh†* (AV.), *khadt†*, *gad* (AV.), *gard*, *gumph†*, *gulph*, *gharsh* (*ghush*), *cam†*, *carv*, *cint*, *cupt*, *cumb*, *cur*, *cūsh*, *chard*, *chā* (AV.), *chur*, *juj*, *jyut†*, *jvar†*, 1 *tan*, *tark*, *tāv* (AV.), *timt*, *rap*, *tvāñg*, *tvar* (AV.), *darbh†*, *darp*, *daridrā*, 3 *dā*, *dān*, 2 *div*, *diksh*, *du*, *dram*, 2 *drāt†*, *dhi(nv)*, *dhūsh*, *dhvar†*, *nard*, *niksh*, *ned*, 2 *par*, *pis*, *puth*, *pūy*, *psāt†* (AV.), *barh* (*brñh*), *bharts*, *bhash*, *bhāsh*, *bhās* (AV.), *bhūñksh*, *bhram†*, *mīnd*, *mīv* (AV.), *yabh*, *raksh†*, *rañgh*, *rambh*, 1 *ras*, 2 *ras*, *ruht†*, *rās* (*rāç*), *riñkh*, *riñg*, *riph*, *ruth*, *rudht†*, *rupt†* (AV.), *rūsh*, 2 *vardh*, 5 *vas*, *vāt*, *vāh*, *vith*, *çat* (AV.), 1 *çad* (AV.), *çañkt†*, *çik*, *sap*, *subh*, *sūrksh*, *stā*, *stigh*, *stim*, *styā*, *sthaç*, 2 *snā*, *sphāy†*, *had*, *has* (AV.), *hikk*, *hras*, *hrād*, *hresh*, *hlād†*.

Of these 242 forms there are 31 (marked †), however, which have derivative words in the Rig-Veda. There remain consequently 211 radicals which cannot be proved to have existed in the language at that time. A considerable share of these are found, however, in the other Vedas (26 in the Atharvan, of which 4 there alone) or in the Brāhmaṇas (several there alone); and a comparison between the whole Vedic and the post-Vedic period would show a far smaller discrepancy here, whereas the exclusively Vedic radicals would be considerably increased in number. It is evident, also, that the absence of any form in the Rig-Veda is no certain, nor hardly even presumptive, evidence of its non-

existence in the language at that period; since one single work of a not large or varied extent, like the Rig-Veda, can embody but a certain part of the language of its time.

But an examination of these 242 radicals evinces, nevertheless, that a considerable share of them may with great probability be considered as of later formation. Thus, as seen above, not less than 63 radicals (only 7 of them in the Atharvan), have the *l*-sound (25 initial, 25 final, 15 medial). But an *l* is generally conceded to be (for the most part, at any rate) a later change of a more original *r*. It is rare in the Rig-Vedic root-forms, occurring altogether in but 11 out of 590 radicals (4 times as initial, *labh*, *lip*, *li*, *lubh*; once as final, *mīl*; and 6 times as medial, *kalp*, *kṣam*, *glā*, *mṛuc*, *mīlā*, *vla(n)g*; and in the denom. *jalp*). The immense disproportion is evident, being nearly that of 14 to 1, or of one *l*-sound in every fourth root of the strictly post-Vedic material to one in every fifty-fourth root of the Vedic. Even the assistance of the seven Atharvan roots in *l* would not change very much this discrepancy. Moreover, several of these *l*-forms give a more direct proof of their late formation, inasmuch as the older *r*-forms are found only in an earlier stage of the language (compare the list below).

The preceding remarks apply also to the lingual mutes and nasal. They also are rare in the Rig-Veda, occurring altogether in only 12 radicals (*iḍ*, *kṛḍ*, *kṛiḍ*, *taḍ*, *niḍ*, *pid*, *phan*, *maṛḍ*, *marn* (euphonic), *visṛiḥ*, *viḍ*, *hiḍ*). But in the other literature they are found in 48 root-forms (only 1 of these in the Atharvan), as is seen in the above list; the disproportion being here nearly as that of 10 to 1, or of one lingual in every fifth root of the strictly post-Vedic material to one in every forty-ninth root of the Vedic. Even here the direct evidence of actual change is not wanting (see below); though probably foreign elements have also entered.

It is worthy of notice that while the Rig-Veda has 100 root-forms terminating in palatals (28 of these the palatal sibilant), only 28 of all the non-Vedic forms (see p. 8) terminate thus (and of these only three in the palatal sibilant): i. e. there is four times greater frequency in a material little more than one and a half times larger, or about one palatal in every ninth or tenth root of the strictly post-Vedic material to one in every sixth root of the Vedic. In regard to the remaining non-Vedic forms, no such marked differences on a noteworthy scale have been remarked.

Another feature worthy of mention, as helping to demonstrate the comparatively late character of many of these radicals, is that 47 of them are more or less evidently changes or developments of more primitive roots, also extant, viz.:—

With an *l*-sound: 2 *kal* (=1 *kal*), *kṣal* (*kṣhar*), *cal* (*car*), *jalp* (*jar*), *jval* (*jvar*), *dal* (*dar*), 1 *phal* (*phar*), *lañgh* (*rañgh*), *lam* (*ram*), *laṃb* (*raṃb*), *las* (*ras*), *likh* (*rikh*), *liç* (*riç*), *lih* (*rih*), *lup* (*rup*), *loc* (*ruc*), *loc* (*ruc*), *cal* (*car*), *glath* (*grath*), *glish* (*grish*), *hval* (*hvar*), *sphul* (*sphur*):—with a lingual mute or nasal, *at* (*at*), *kutt* (*kart*), *ghatt* (*gharsh*), *naṭ* (*nart*), *paṭh* (*prath*), *bhaṇ* (*bhan*),

sphat (*sphar*, *phal*?), *sphut* (*sphaṭ*), *vesht* (*vish*):—others, *āñch* (*ac*?), *arj* (*ar*), *kāñksh* (desid. *kam*), *cakās* (*kāṣ*), *garj* (*gar*), *guñj* (*gu*), *cint* (*ci*), *jyut* (*div*), *tim* (*tam*), *tvar* (*tar*), *diksh* (desid. *duksh*), *daridrā* (intens. *drā*), *ruksh* (*riṣ*), *rās* (*rā*), *riñkh* (*riñg*), *rudh* (*vardh*).

THE PRODUCTIVENESS, finally, of the verified roots should be noticed. Like germs planted in the fruitful soil of living language, they have sprung up and borne fruit, often a hundred-fold. Or, it might be said with more appositeness that, like living members of the society of language, they have entered into union with other members, and given birth to new families of words: by means of suffixes, to nouns on the one hand; and, by means of prepositional prefixes, to new verbs or to nouns on the other. So general is this productiveness, and the trace of it, that it might well be called the law of a genuine root. Out of our 832 radicals (denom. deducted), some of them of a very late formation, 814 observe this law; and the vast majority of these, or rather more than 700, have derivatives of both kinds (only about 35 being found compounded with prepositions, but without derived nouns or adjectives; and about 65 *vice versa*).

Only 18 authenticated root-forms (waiving a few uncertain ones) appear barren and isolated in the dictionary: viz. *krād*, *gard*, 2 *jar*, *tuṣ*, *vañg*, *dan*, *bal*, *bhuraj*, *bhri*, *ruth*, *vruḍ*, 1 *ṣad*, *ṣcam*, *ṣār*, *ṣuj*, *stigh*, *vith*, *hās*. But almost every one of these appear in a single passage only (and that nearly always in RV.); only one of them (*ṣad*) in more than three passages. They are therefore invested with much uncertainty in regard both to sense and connection. Besides, *bhuraj* is a late derivative, and *ṣcam* is perhaps incorrect writing for *ṣam*. This feeble exception to the general rule is, therefore, of a wholly uncertain and insignificant value. Possibly a closer examination may add a few forms to these; but it is as likely to remove some of these from their present isolated state.

THE UNAUTHENTICATED VERBAL ROOT-FORMS.

The number of radical forms, graphically or otherwise distinct, which have not been verified in use, is a little above eleven hundred. By allowing for forms of identical meaning, on the same principle on which this was done for the other class of radicals, the number is reduced to somewhat less than a thousand. An important fact, however, must be considered in connection with this statement. It is this: not only a large part of these forms, but also a considerable number of the authenticated radicals, are invested with meanings incompatible with one another, and in the latter case, with the verified sense: and many of them are assigned to two or more conjugational systems. Were all these meanings to be accepted as real, then such radical forms should rightly be divided into as many radicals as the meanings warrant. This would probably raise the total number considerably above

two thousand. In some instances (as for *amb*, etc.), they are thus properly separated in the Dhâtupâtha; and etymologizers are also led, when necessary, to keep them apart. It would, however, be an ungrateful task to try such a separation, so long as the whole subject is involved in much doubt and shows evident corruption; and, in general, only the unauthenticated forms, but not their varied meanings, will be considered for the present.

To determine the value and character of these doubtful forms is a very precarious task. The following considerations seem, however, to be strong presumptive evidence in favor of the unguineness of the vast majority of them.

I. THE DISPROPORTION between authenticated and unauthenticated radicals.—Some scholars of the highest authority have, to be sure, trusted to the discoveries of a fuller investigation of the whole literature for the justification of doubtful forms; or have made dialectic variations and foreign borrowing responsible for this mass of strange material. Thus Westergaard, in his *Radices Linguae Sanscritæ*, expresses himself in regard to the idea of fictitiousness: “Mira tamen assertio, quum tam paululum literæ Indicæ notæ sint. Puto contra quemque sibi persuasum habere posse, eas radices, de quibus omnes grammatici consentiant, quum literæ Indicæ melius cognotæ fuerint, omnes exemplis inde sumptis probatas repertum iri.” Benfey, in his *Vollständige Grammatik der Sanskritsprache*, § 140, without questioning the genuineness of any radical given by native lexicographers, suggests that dialectic usages and the engrafting of foreign elements have caused a great diversity of forms.

A vast progress in the study of the Sanskrit literature has been made since the Danish scholar uttered his cautious words (1842), and still the unverified elements remain virtually at the same point as then. The very oldest records of the language have been in the main thoroughly sifted; and all the more important parts of the later literature, theological, philosophical, and æsthetic, have been searched, and still over a thousand—or shall we say over 2,000?—alleged roots have never been met with. And we are to believe that this host of radicals will be found chiefly in that part of the post-Vedic literature which has not been investigated, in spite of the fact that the vast field actually searched shows but a very small root-increase even from the earliest monuments down (comp. p. 8, 2, note). In view of these considerations, it seems reasonable to suppose that we can never hope to find, at the best, more than a small fraction of this mass in the literature.

Still, there are weightier objections than these, bearing also on the other opinion—that the dictionary has been recruited from dialects or unrelated tongues. We refer to:—

II. THE DIFFERENT RELATION which the authenticated and the unauthenticated radicals sustain to the other material of the vocabulary.—The authenticated elements (as has been pointed out, p. 10) are, almost without exception, living germs growing and ramifying: they have given birth to new parts of speech, and

have in union with prepositions formed new verbs. So general is this principle of organic development, that it could be used with a high degree of certainty as the special touchstone by which uncertain roots might be tested. How, then, do the unverified roots come out of such an examination? Out of about 1,000 radicals (genuine forms with unverified meaning *as well as* inflection counted), less than 150 seem to have any possible connection in sense with surrounding or similar nominal forms, viz. :—

añç (= *añs*), *ag*, *agh*, *and*, *andh*, *abhr*, *ark*, *al*, *ind*, *ul*, *oj*, *on*, *kac*, *kañc*, *kat*, *kath*, *kad*, *kan*, *kanth*, *kand*, *kab*, *karn*, *kard*, *kal*, *kall*, *kav*, *kil*, *kid*, *kil*, *kel*, *kut*, *kun*, *kumb*, *kul*, *kuç*, *kúl* ('enclose'), *krath*, *kla(n)d*, *klib*, *kshur*, *kshmdy*, *khaj*, *khur*, *gaj*, *gad*, *gandh*, *gur* (*gr*, 'sprinkle'), *garv*, *guh*, *gu*, *gú*, *gárd*, *goshí*, *granth*, *ghar* ('shine'), *gharsh* (= *harsh*), *ghur*, *cand*, *cash*, *cit*, *cunt*, *jaj*, *jat*, *jim*, *tal*, *tik*, *dim*, *tañk*, *tay*, *tarn*, *tal*, *dán*, *dyai*, *drun*, *dvar*, *dhi*, *dhish*, *dhor*, *dhvániksh*, *nar*, *nal*, *nishk*, *pa(ñ)c*, *pand*, *parn*, *pít*, *pith*, *piv*, *pun*, *pur*, *púsh*, *phakk*, *bal*, *bid*, *bis*, *bukk*, *buç*, *bus*, *bhand*, *bhall*, *math*, *man*, *mal*, *maç*, *mas*, *mád*, *mdrj*, *mund*, *mur*, *mus*, *yant*, *ray*, *rek*, *lañj*, *vat*, *vanth*, *vark*, *varc*, *valbh*, *vit*, *vel*, *veh*, *çac*, *çath*, *çand*, *çav*, *çinigh*, *çish*, *çunth*, *çarp*, *çul*, *çron*, *çlak*, *çvabhr*, *sarj*, *sur*, *skhad*, *sthal*, *sthir*, *hath*, *hal*.

The connection which these radical forms may have with certain nouns or adjectives, has been noted on the very questionable supposition that the latter are all genuine. The list would be much smaller still, were only authenticated nominal forms to be considered. Further, it must be observed that this connection is nearly always restricted to one of the meanings of the radicals, that it extends frequently to but one or two words, and that it is sometimes of a very doubtful character. This apparent relation may be owing to one of three causes. Either the root-forms are genuine, and have given rise to the word or words in question; or they have been invented or inferred by grammarians to account for the same, or to serve as their denominatives; or, finally, the agreement is purely an accidental one. It is probable that each of these causes has been active; but a study of this relation, which has often too artificial an aspect to be credited as natural, makes it more than likely that the second cause has been especially instrumental in bringing it about. The fact that the greater part of these radical forms are given without connection with any prepositions (contrary to the nature of real roots, p. 10), gives support to this opinion. Even Böhtlingk and Roth, who maintain a cautious reserve in regard to the real nature of the authenticated root-forms generally, leaving them to stand for what they may be worth, not unfrequently suggest such forms as the above to be artificial.

But these few radicals form but a small fraction of the whole unidentified mass. There remain about 850, which either appear like perfect strangers in the midst of clusters of words that might be akin to them in form, but nowise in meaning, or else stand perfectly isolated in both respects (there are about 300 of the latter).

Thus, while the authenticated radicals appear like veritable *prajanāḥ* surrounded by a generally numerous kindred, which they never, as a rule, entirely survive, these unverified forms have no kindred, or have outlived them all, if they ever had any! There seems to be no escape from this anomaly, except in the supposition that these forms are, for the most part, intruders of some sort. Shall we then call them dialectic borrowings? But the same objection would apply also to this hypothesis. It seems, namely, in the first place, entirely incredible that all dialectic derivatives should have been completely left out, while such a wholesale borrowing of dialectic roots took place. And, secondly, what must the dialect have been, if this host of roots had no connection in sense whatever with so similar classical words as those by which they are often surrounded, or if they had no kindred whatever in the literary language?

The idea that they could be borrowed from unrelated tongues, if it was ever held, needs no refutation. Such a borrowing could only be sporadic, and would more likely be of nouns than of radicals.

But an equally strong argument against the genuine character of the plurality of these forms seems to be:—

III. THE DIFFERENT RELATION between authenticated radicals of kindred form and meaning on the one hand, and unauthenticated ones of the same kind on the other; and the artificial aspect of the latter.—The verified radicals of kindred form and meaning were connected with one another chiefly by means of an extension or inner vowel-change of the simpler root. Radicals of kindred meaning without any such connection, but running on the same scale, as *kram*, *bhram*, or *dhvan*, *bhan*, etc., though not wanting, are comparatively few in number; and the longest series of them counts but seven (or nine) verbs (*tan*, etc., see p. 7). An examination of the unauthenticated forms shows that they, on the contrary, are connected chiefly, and to a prodigious extent, on the latter principle. Radicals with absolutely identical meanings, and with that analogy of form which excludes the principle of growth or decay, are so frequent, that not far from four-fifths of the whole material in question can be arranged in groups of such parallel forms, containing each from two or three up to twenty or even more of them. To enumerate all such groups would consequently amount to giving the bulk of the unverified root-forms. But as the scattered connections are generally pointed out in dictionaries, a few of those larger groups which they form when collected may here suffice as examples. Thus: *keṇ*, *kheṇ*, *geṇ*, *gleṇ*, *peṇ*, *pleṇ*, *meṇ*, *mleṇ*, *ṣeṇ*; *meb*, *peb*; *mep*, *lep* are all in the Dhātupāṭha defined by *sevane* or 'serve, honor':—*amb*, *kamb*, *khamb*, *gam̐b*, *ghamb*, *cumb*, *tamb*, *nam̐b*, *pamb*, *bamb*, *mamb*, *ṣamb*, *shamb*, *samb*, *sāmb*; *cump*, *cham̐p* are all defined by *gatau* (*gatyām*) or 'go':—*met*, *med*, *mret*, *mred* (also real), *mlet* *mled* are defined by *unmāde* or 'be angry':—*kakh*, *khakkh*, *gaggh*, *ghagh*, *ghaggh* are defined by *hasane* or 'laugh':—*marc*, *marj*, *mārij*, *miṇj*, *muñj*, *mrj*, *gaj*, *marv* are all *ṣabdārthāḥ* or words

meaning 'sound':—*tup, tump, tumb, tubh, tumph, turv, trup, cumb, cubh, cumbh, rph, rimp, ramph, cribh, crimbh, sribh, srimbh*, all mean 'hurt, kill':—*arb, karb, kharb, garb, gharb, carb, turb, narb, parb, barb, marb, larb, çarb, sharb, surb*; *purp, rarp, raph, karv, tharv, pharv, marv, sarv*, all again mean 'go':—etc., etc.

But, further, many of these groups represent the same meaning, and run into one another; and when all words with the same definition are collected, their number sometimes reaches enormous proportions. Thus especially in case of the radical forms with the alleged meaning 'go.' Counting all unauthenticated instances (the unverified 'go' of auth. roots, and a few Sastra-roots included) not less than 336 radicals are said to have that sense. And it will be found by the following arrangement that nearly all of them fall, more or less evidently, into such groupings of analogous forms.

2 *añg, tañg, trañg, mañg, rañg, luñg, vañg, çañg, glañg, çvañg, svañg*; *añgh, mañgh, vañgh*; *cargh, dagh, ragh*; *añk, kañk, trañk, mañk, vañk, çvañk, glañk, çvañk, svañk*:—*nakh, naikh, makh, maikh, rakh, raikh, lakh, luikh, vakh, vaikh, trakh, traikh, ukh*;—*ikh, liñkh, triñkh, rikh, liñkh, çinñkh*:—*phakk, makk, vakk, shvakk, svakk, shukk*:—*çik, tik, tik, tik, tig, çik*; *sek, srek, svek*:—*mask, mashk, vask, vashk, svask, svashk, svashkh*:—*liñg (= riñg)*:—*ac, çvac, sac, añc, tañc, vañc, mañc, nañc, çañc, çvañc, sañc*; *marc*:—*kruñc, muñc, mruñc, mhuñc*; *mlup*:—*kuic, kuñc, gruc, gluc, gluñc*; *çch, vich*:—*aj, kshaj, dhvaj, dhvaj, raj, rej, rañj, vaj, çvaj, çvañj, sajj, sañj, sarj*; *ij, dhrij, dhrij, dhrij, nij, vij*:—*jesh, nesh, pesh, presh, bresh, blesh, bhresh, bhlesh, 2 rsh, ash, push*;—*pis, bis, mis, vis, pes, ves*; *biç, liç, viç, beç*:—*as, 1 kas, 2 kas, kañs, srañs*:—*trksh, daksh, jañksh*.

amb, kamb, khamb, gamb, ghamb, camp, camb, champ, tamb, namb, pamb, bamb, mainb, ramb, rimb, çamb, shamb, samb, sãmb, kshump:—*arb, karb, kharb, garb, gharb, carb, turb, tharv, narb, parb, pharv, barb, marb, marv, lurb, çarb, sharb, surb, sarv*;—*raph, ramph, rarp, varph*:—*kap, krip, krap*; *kep, glep, prep, mep, rep, reb, rev, lep*;—*pav, çav, ðuv, rinu*; *druv*:—*jam, dram, brahmi, ayam, hamm, drumm, mûn*:—*cay, day, nay, pay, may, ray, vuy, hay, hary, vyay* (or = *vi i*):—*kel, khel, kshvel, cel, cell, pel, phel, vel, çel, sel*; *pal, pall, phal, val, vall, çal, çall, çval, çvall, sval, sal, hval*; *til, till*:—*abhr, mabhr, vabhr*:—*gur, ghâr, dhâr*:—*an, kan, kan, can, phan, pen, ven, ven, pain, lain, çan, çun, çon, jun, drun*:—*kaç, kañt, kañd, nuç, pat, pañd, çat*; *añh, math, manth, gath, çvath, çvañth*; *çvart, svart*;—*jud, drud, drul, lut, luth, lunth, runth*; *hud, hul, hūd, hod, haud, hrud, hraud*:—*it, rt, kit, suñt, smit*:—*dhrā, psā, vā, çā (çai), ccyā (çyā)*:—*pi, çvi, hi, neni*; *pli, bli, lvi, vli*:—*kū, klu, gu, çyu, jyu, jhu, jhyu, du, dū, dru, drā, dhu, dhā, dhru, dhru, pru, su*:—(ah, añh, ir, il, gandh, nard, vast, çc(y)ut, sidh, not referable to any of the preceding groups).

This grouping, though not always certain, is with very few exceptions perfectly evident. Into the whole number 336 enter

about 65 radicals verified in other sense than 'go, move.' But these 'go'-roots, though much exceeding any others in number, are not the only ones of abnormal numbers and obvious classifications. Another very frequent definition is 'hurt, kill' (*hiṃsādyām*, etc.). There are about 110 forms with that meaning assigned to them; and they can all, with very few exceptions, be arranged into 18 or 19 groups of the same nature as those above (for examples, see p. 14). Then there are about 70 equally classifiable forms (for examples, see p. 13), called *śabdārthāḥ*, or words expressing sound; 37 (see p. 16) mean 'speak, shine;' about 60 mean 'speak;' and so on.

These facts, it seems, bear an aspect too evidently artificial to be accepted as the natural results of linguistic processes. It appears even that they indicate the very cause of such strings of root-growth which, spreading and ramifying everywhere in rank and intricate confusion, underlie the whole soil of the language. It seems probable that the actual existence of a few similar forms with a kindred meaning, and perhaps also some noticed dialectic varieties of the same word, have gradually led lexicographers to an artificial extension *ad libitum* of such kindred forms. The first cause of the extension might have been a desire to set up roots for certain classes of words the real elements of which were unknown. This supposition seems confirmed by the fact, that several words are said to be derived from unauthenticated root-forms with which they have a seeming connection in form, but none in idea. In coining these counterfeits, however, it seems as if the guiding principle had been at first to model them in form and sense on some genuine radical, rightly or falsely interpreted; for in the greater number of instances the strings of kindred forms clearly show such a *point d'appui*. Thus, in the examples given above, *keṇ, kheṇ, geṇ, gleṇ, peṇ*, etc., all meaning 'serve or honor,' lean on the real root *sev* of the same meaning; *cay, day, nay, pay*, etc., for 'go,' may depend on *ay*, 'go;' 2 *ang, tang, mang, vang*, etc., for 'go,' are evidently variations of 1 *aṅg, vaṅg*, 'go;' further, *aṇ, kaṇ, kuṇ, caṇ, caṇ, 2 taṇ, dhaṇ, dhaṇ, dhraṇ, dhvaṇ, dhvaṇ, baṇ, baṇ, maṇ (?) vaṇ, vaṇ*, all meaning 'sound,' clearly agree with *taṇ, kvaṇ* etc. (p. 7); and so on.

These two principles, namely, that of coining roots for certain classes of words, and of modelling those new vocables on true radicals not only in form, but also in sense, independently of the word or class of words they were to preside over, would seem to have been the beginning of the extension. Gradually, however, these principles, false from the beginning, ran into excess in two directions. On the one hand, the mere desire of adding a new vocable by means of this current change by analogy, would seem to have given rise to a host of forms, even when there were no noun-forms to account for. In a few exceptional changes the larger part of the alphabet is taxed for such variations. Thus, for instance, in the series of unverified roots beginning *amb, kamb, khamb, gamb, ghamb*, etc. (some of which stand perfectly isolated),

only eight consonants are wanting as initials. It is worth noticing that in these eight instances no nouns calling for such fictitious radicals are found. The series beginning *arb*, *karb*, *kharb*, *garb*, etc., represents a similar case. On the other hand, the desire to account for words without known roots probably freed itself in a limited number of cases from the prevailing principle of dependence on other roots (especially where no suitable ones were found), and assumed, by means of inference, meanings akin with the word to be explained. From these inferred, and no doubt at times rightly inferred, radicals new-derived groups again were established. Finally some sporadic causes of a still more arbitrary nature may have been instrumental in the creation of new vocables.

The subject of the diversity of definitions may properly be considered here. As was pointed out above, a large proportion of the authenticated root-forms have two or several irreconcilable meanings assigned to them; and many authenticated radicals are burdened with definitions never verified. The majority of these definitions seem plausibly explained by the following considerations:

First, the same principle which led to one fictitious meaning of a radical also led to others: i. e., a certain analogy of form with another radical suggested a renewed transfer of meaning; and sometimes the desire to explain words, additional definitions. Thus we find, for instance, in the series referred to already, that *gandh*, *lik*, *tig*, *dru*, *dhru*, *dhâr*, *vast* are enrolled among both the 'go-' and the 'kill'-groups.

Secondly, within the very definitions the idea of using closely similar words has for some reason, perhaps to cover an uncertainty or from habit, been applied. Thus the two *bhâḍane* and *bhâsane*, so similar in form but different in sense, have been assigned to not less than 37 forms, also falling into different groups, viz.: *kuṅṣ*, *kuṅs*, *ruṅṣ*, *daṅṣ*, *daṅs*, *traṅs*, *knaṅs*, *piṅs*, *bhṛṅṣ*:—*kup*, *gup*, *dhup*:—*ghat*, *ghant*, *ghand*, *tad*, *nat*, *nal*, *pat*, *put*, *punt*, *puth*, *rut*, *but*:—*piñj*, *nūñj*, *tuñj*, *luñj*, *bhañj*:—*barh*, *vârh*, *bañh*, *varh*:—*añh*, *manh*, *rañgh*, *lañgh*:—(*lok*, *loc* real in sense of 'see,' probably originally 'shine':—*vich*, *vîc*). The two meanings in question seem too different to be of so frequent occurrence together; and only one root-form (or two? comp. p. 7) having both of them is verified in all the language. But the insufficiency of that support has been pointed out already. The weak testimony of *φαίνα*, *φημι* (same p.) appears also too uncertain to outweigh the artificial aspect of the proceeding. Other definitions of a similar character are *avarane*, *âpravane*, *âplavane*; *upaharane*, *apuharane*, *avaharane*; *thâvakarane*, *hâvakarane*, and so on.

Sometimes by prefixing the privative *a*, or in some other way, two contradictory definitions for the same word are obtained: as in *hrap*, *hlap*, *klap*, defined by *vyaktâyâm vâci* and *avyaktâyâm vâci* or in *sîrksh*, defined by *anâdare*, *âdare*, etc.

In the third place, the real roots were subjected to many vague

and stumbling or even false interpretations, which in their turn reacted on the others. At last, as a result of the whole artificial system, we may suspect arbitrarily appended meanings. And thus the dictionary became gradually burdened with a heap of inorganic rubbish, in some parts hiding and well nigh extinguishing its real life. So uncertain are the native definitions that in some instances not one of those given to genuine radicals have been accepted by modern investigations.

We have yet to note one more reason for considering the majority of the unverified root-forms as spurious, namely:—

IV. THE DISCREPANCY between the number of authenticated and unauthenticated radicals represented in cognate languages.—Fick, in his *Wörterbuch der Indogermanischen Sprachen*, finds about 450 of the authenticated radicals, as here given, proved by collateral evidence to have belonged to the original Indo-European speech. But of the whole mass of unauthenticated forms or meanings, only the following 80 have been by him accepted on such evidence:—

agh, arj, u, kakh, kac, kaṇ, kar (kill), *kark, kuc* (sound), *kuñj, kud, kuh, knu, knūy* (stink), *kmar, khaj, khad, kharj, khav, khā, khur, khod, gagh, gaj, gandh, gar* (sprinkle), *gu, ghūr, can, cap, jhar, tip, tiv, tup, tump, tuph, tumph, tus, trakk, trañk, trañkh, trañg, trup, truph, trump, triumph, tvañc, drāgh, dhor, dhran, pañ, pard, piñj, bhrāc, bhāc, mac, may, mañj* (= *mañj*), *minv, muj, mund, mā, ramb* ('sound'), *lambh, vañg, galbh, gas, çibh, çlākh, sul, sur, skund, skhad, stak, stigh, stip, sthal, sward, hrap, hlap*.

Though the evidence given in their favor be sometimes convincing, it seems, however, in other instances, too weak. Thus *hrap, hlap*, 'sound,' are supported only by Old Norse *gjālf-r*, 'sound, roaring,' and by a reference to Lith. *zleptērėti* and Sanskr. *jalp*, 'speak lowly;—*tip, stip*, 'drip, sprinkle,' by Gr. *τίφ-ος*, 'bog, ditch,' *τίφ-ιο-ς*, 'boggy,' *τίφ-η*, 'water-spider,' Lat. *tipāla*, 'water-spider,' Lith. *tep-ù, tèp-ti*, 'smear,' stem *tap*.—Moreover, in a few of the 80 radicals, Fick has been obliged to assign meanings different from those given in the Dhātupāṭha.

Though the general conclusions from the preceding arguments would be that the vast majority of the unauthenticated forms are pure figments of the native grammarians, the probability still remains that a certain percentage of them are real, and either stored away in some unexplored part of the literature,¹ or, for some reason, never recorded there.

Aside from the possible disclosures of future research, only a careful weighing of all the evidence, external and internal, should decide. The collateral evidence of cognate languages is of course

¹ Occasionally a root which seemed lost beyond recovery or false will come to light. Thus the roots *stigh, vith* (*veth*) *plāy* (not really a root, but from *pra + ś*) have been found but recently, by Dr. Schröder, in the *Maitrāyaṇi-Saṃhitā*.—Böthlingk-Roth were able to add, in their *Beiträge*, a dozen roots, nearly half of which, however, are not given in the Dhātupāṭha.

of prime importance, but should not decide alone, unless very clear. Thus, for instance, *khaj*, 'stir up, churn,' is supported not only by Gr. *κुक-έων*, 'stirred-up drink,' *κुक-αν-άω*, 'stir about;,' Lat. *coc-ētu-m*, 'stirred-up drink;,' Old Norse *skak-a*, etc.; but it has also several clear derivatives, as *khaja*, 'churning,' *khajaka*, 'churning-stick,' etc.:—*skhad*, 'split,' is supported by Gr. *σχάζω*, 'split,' Lat. *scandula*, 'splint,' etc., and is followed by *skhadana*, 'cutting to pieces':—*gudh*, 'cover,' besides being assisted by Gr. *κείθω*, Germ. *Haut*, etc., and followed by some derivatives, seems to be the older form of *guh*:—*gharsh* seems to stand in the same relation to *harsh*:—*kakh*, 'laugh,' is supported by Gr. *καγχ-άζω*, 'laugh;,' Lat. *cachinn-ari*, 'laugh,' etc.; but it has no derivatives. Still its meaning is not one of the current coins of the spurious vocabulary; and it stands alone with nothing to account for, and seems to be of onomatopoetic origin. But if it be established as a genuine radical, there is nevertheless reason to suspect its satellites *khakkh*, *gaggh*, *ghagh*, *ghaggh* as arbitrary variations.

Much more uncertainty belongs to a form like *piñj*, for instance. To be sure, the meaning 'paint' seems supported by Gr. *πινγ-ός*, Lat. *pingo*, and Slav. *peg-u*; but, on the other hand, it is overlaid with such a variety of meanings besides 'paint,' as 'sound, join, adore, kill, be strong, give, take, dwell, speak, shine'! Its natural form-derivative *piñja* has no connection with it in sense; while 'paint' may be added simply to explain *piñga* (of uncertain derivation), 'tawny, red.' Finally it seems in the senses of 'speak, shine' to connect itself with the suspicious groups of those meanings given above. On the whole, therefore, the weight of evidence appears to be less for than against its genuineness.

Whatever proportion of the unauthenticated root-forms may be established as true, the doubtful aspect of the great majority of them will probably remain unchanged; and this fact gives additional weight to the warning of Curtius: "Wer nicht bloss in Bezug auf die Laute sondern auch in Bezug auf das geistigere Element der Sprache Genauigkeit erstrebt, der wird sich beim Etymologisiren vor den ἀμενηνὰ κάρηνα der Wurzelverzeichnisse wohl zu hüten haben."

AUTHENTICATED ROOTS, ROOT-FORMS, AND DENOMINATIVES OF THE DHÂTUPHÂTHA.¹

[Abbreviations, etc.:

* , denominative.—*V.*, occurring in the Rik and in the Atharva-Veda (roots occurring only in the latter thus indicated: comp. note, p. 7).—*V-D.*, only derived forms occurring in the Rig-Veda.—*p-V.*, occurring in the post-Vedic (= non-Rik or Atharva-Vedic) literature.—*p-V-D.*, only derived forms occurring in the post-Vedic literature.—*P.*, found compounded with prepositions (almost always as a new verb).—*D.*, derived words occurring.—*BR.*, Böhlingk-Roth.—*Curt.*, Curtius, Griech. Etym.—*F.*, Fick, Wörterb.—*Gr.*, Grassmann.—*Dhât.*, Dhâtupâtha.]

añs,* only with *vi*, 'divide; render harmless, ward off' [Only two ex. For *añç* (Dhât., 'divide'), not found, from *ançā*, 'part'? *p-V.*; *P.*, *D.*]

añh (?), 'join' (?). [Only one very doubtful form, *andha* (RV.). Other forms referred to *ah*, *añh* belong to *hi*: see Aufrecht, Z. D. M. G., xxv. 234; and BR., Nachträge.]

aksh, see under *ac*.

āk,* see under *ac*.

ākh,* see under *ac*.

ag, 'go, move.' [*V-D.*, *p-V.*; *P.*, *D.*]

From it:—*iñg*, 'move, stir, tremble.' [*V.*, *p-V.*; *P.*, *D.*]

ac (*añc*), 'bend, curve, curl; distinguish or adorn (?)' [*V.*, *p-V.*; *P.*, *D.*].

Akin:—*āñk*,* 'mark, brand.' [Fr. *āñka* (*añc*), 'mark'.—*āñkh*,* 'cling to, clasp; draw, check.' [Gehört ohne Zweifel zu *āñka* ('hook,' fr. *añc*) (?), BR. *V.*, *p-V.*; *P.*, *D.*].—*āñch*, 'bend or put straight, straighten, put right.' [*p-V.*; *D.*]

aj, 'drive, throw.' [*V.*, *p-V.*; *P.*, *D.*]

From it:—*tj*, 'set in motion, drive.' [BR. Nachtr. *V.*; *P.*, *D.*].—*ej*, 'set itself in motion, move, stir; tremble.' [*V.*, *p-V.*; *P.*, *D.*]

āñc = ac.

āj, 'smear, anoint; adorn, honor.' [*V.*, *p-V.*; *P.*, *D.*]

at, see under *at*.

at, 'go, wander, run.' [*V.*, *p-V.*; *P.*, *D.*] From it:—*at*, 'go about, roam.' [*p-V.*; *P.*, *D.*]

ad, 'eat.' [*V.*, *p-V.*; *P.*, *D.*]

an, 'breathe, gasp.' [*V.*, *p-V.*; *P.*, *D.*]

am (the simple pers. form in only one passage), 'fasten, fix' (BR. Nachtr.); part perf. *emican*, 'hurtful, destructive; causat. injure; with *abhi*, 'proceed violently against, torment; with *sam*, 'approach urgently, secure one's self of; bind or unite one's self; determine, fix.' [Gr. 'proceed with might, be hurtful or destructive.' Perhaps 'press down, fix; oppress, injure; with prepositions 'press against,' etc. [*V.*, *p-V.*; *P.*, *D.*]

ay = i.

ar (*r*, *ṛ*), 'set in motion, send forth or up, stir up; cause to reach a place (whence 'give; return; fit in or fix,' etc.); reach, meet; meet as an enemy, injure.' [*V.*, *p-V.*; *P.*, *D.*]

From it:—*arc* (*rc*), 'shoot forth, beam; adorn; praise; with *sam*, 'fix, (compare *ar*). [In BR. divided into three roots: 1 'beam,' 2 'shoot,' 3 'fix:' in Gr. as here. *V.*, *p-V.*; *P.*, *D.*].—*arch* (*rch*), 'proceed against, attack, hurt; reach, attain to; come into possession of.' [*V.*, *p-V.*; *P.*].—1 *arj* (*rj*), *arjati*, 'reach, come into

¹ The meanings appended to these forms comprise, in the main, the leading definitions recognized by the Petersburg Dictionary, or by Grassmann's Rig-Vedic vocabulary. The principles of arrangement have been pointed out above. Any important departure from especially the former authority is noted.

possession of, procure.' [p-V.; P., D.]—*ard*, 'be stirred up, be shattered; strain, hurt, torment, kill; (stir by prayer?) ask, beg.' [V., p-V.; P., D.]—1 *arsh* (*rsh*), *arshati*, 'glide onward, flow, jet; run past.' [V., p-V.; P., D.]—2 *arsh* (*rsh*), *rshati*, 'push prick.' [V., p-V.; P., D.]—*ar*, 'set one's self in motion, proceed, go away; set in motion, raise, hurl; promote; raise (the voice); announce.' [V., p-V.; P., D.]—*ri*, *rt*, 'set free, let flow; flow; dissolve; separate, scatter.' [V., p-V.; P., D.]—*ric*, 'empty, set free; give up, abandon.' [Fr. *ri*. In Zend 'pour out.' V., p-V.; P., D.]—Compare also *arth*,* *ric* etc., *esh*.

argh,* see under *arh*.

arch (*rch*), see under *ar*.

1 *arj* (*rfj*), see under *ar*.

2 *arj* (*rñj*), *rñjati*, 'be stretched, run out in a straight line, spring forward; strive after, desire.' [V., p-V.; P., D.]

Akin:—2 *raj*, 'make straight, set right; lead, command.' [Gr.; BR. only 1 *raj*: comp. note to 1 *raj*. V., p-V.; P., D.] From this:—2 *rdj*, rule, command. [Gr.; BR. only 1 *rdj*: see *raj* above. V., p-V.; P., D.]

art (*rt*), only one ex. (AV.) with *anu*, 'seek to gain, invite' (?); and one with *abhi* (?). [BR., Nachträge. V. (only AV.); P., D.]

arth,* 'strive after, wish.' [Fr. *artha* (*ar?*), 'aim, work.' V., p-V.; P., D.]

ard, see under *ar*.

ardh, see under 1 *vardh*.

arç (*rç*)=*ric* (? BR.; see note to *ric*).

1, 2 *arsh* (*rsh*), see under *ar*.

arh, 'deserve, be worth; have a right; be obliged, full due; be forfeited.' [V., p-V.; P., D.]

Akin:—*argh*,* only two ex., 'have a value, be worth.' [Rather denom. of *argha* (*arh*), than older form of *arh*, BR. p-V.; P., D.]

av, 'have joy, be pleased; be pleased with, favor, help, protect, promote, like; wish.' [V., p-V.; P., D.]

aç (*ñç*): 1 *açnoti*, 'reach, arrive at; come into the possession of, obtain; get in one's power, master, be able;

reach out, offer:' 2 *açndti*, 'enjoy (food), eat.' [*añç* only in perf. Both V., p-V.; P., D.]

From or akin with it:—*aksh*, 'reach, meet; obtain.' [V., p-V.; P., D.]—*naksh*, 'reach, arrive at.' [V., p-V.; P., D.]—1 *naç*, *naçati*, 'reach, hit, fall to the share of.' [V., p-V-D; P., D.]—*ç*, 'get in one's power, master; command, possess, dispose of.' [V., p-V.: D.]

1 *as*, 'be.' [V., p-V.; P., D.]

2 *as*, 'hurl, shoot, throw or drive away.' [V., p-V.; P., D.]

1 *ah* (only in perf.), 'speak.' [V., p-V.; P., D.]

2 *ah*, 'join, string together, prepare.' [V., p-V.; P., D.]

Akin:—*naç*, 'bind, tie on, put on.' [V., p-V.; P., D.]

añch, see under *aç*.

ap, 'reach, attain to, meet; come to the possession of, obtain, win; (pass. refl.) reach its end, be full or complete.' [Traces of *ap* in *apas*, *apnas*. [V., p-V.; P., D.]

ar, 'praise' (?). [Comp. *ar*, *arc*. V.; D.]

as, 'sit; dwell, tarry, settle; sink or lie down, come to an end.' [Connected with *as?* Comp. Curt., 568. V., p-V.; P., D.]

i, (*ay*, *i*), 'go, move; go to or away,' etc. [V., p-V.; P., D.]

From it:—*in*, *inv*, 'cause to go forth, drive (away); force; promote; exercise power over, master, possess.' [*inv* is from *in*, as this from *i*. V., p-V.; P., D.]—*ish*, five conj' forms: 1 *ishyati*, 'set in rapid motion, hurl, send; raise (the voice), announce; stir; promote;' with *anu* ('set one's self in motion after,' whence) 'strive after, seek, seek to win, search:' 2 *ishndti*=1, without *anu*: 3 *ishati*, only with *anu* and =1: 4 *eshati*, with or without *anu*, 'strive after, seek to reach or win:' 5 *icçhati*; with or without *anu*, 'strive after, seek, seek to win, wish, long for; intend.' [By BR. divided into five separate roots. Three simple forms of *eshati* given in sense of 'seek,' etc.; but 'they might

- also be referred to *esh*.' 1, 2, 5 V., p-V.; 3, 4 p-V.; P., D.]—*ish*, 'hurry or run away, flee.' [Perhaps a desid. of *i*. V., p-V.; P., D.]—*ya*, 'go, proceed, go to or run away, etc.; go or appeal to.' [V., p-V.; P., D.]—*yāc* (fr. *ya*), 'approach appealingly, apply to, entreat, pray.' [V., p-V.; P., D.]—*yād* (fr. *ya*), 'only in pres. partic.: 'proceeding in union with. proceeding.' [Gr.; BR., 'closely connected or in union with.' V., p-V-D. ? D.]—*ya y**, 'do away with, expend, squander.' [Fr. *vyaya* (*vi*, *i*). p-V.]
- iñg*, see under *añg*.
- idh* (*indh*), 'kindle.' [V., p-V.; P. D.]
- in* (*inv*), see under *i*.
- indh=idh*.
- inv=in*.
- il*, 'keep still, become quiet.' [BR. give a R-Vedic form, but Gr. with Aufrecht and Müller read it *il*. [V. (A.V.), p-V.; P., D.]
- ish*, see under *i*.
- i=i*.
- ish*, 'see, behold, perceive.' [Desid. of a lost *ac*, from which *akshi*, 'eye.' V., p-V.; P., D.]
- inikh*, 'swing, shake.' [V., p-V.; P., D.]
- ij*, see under *aj*.
- id*, 'implore, beg; honor (by sacrifices, etc.).' [V., p-V.; P., D.]
- ir*, see under *ar*.
- irshy**, 'envy.' [Probably contraction of *irasy*. p-V.; D.]
- ic*, see under *ac*.
- ish*, see under *i*.
- ih*, 'strive after, long for.' [V-D., p-V.; P., D.]
- u*, 'cheer, urge' (BR.);—'call out, announce' (Gr.) [Perhaps shorter form of *av*, BR. Only 3 ex.: 2 V., 1 A.V.; P., D.]
- uksh* (*vaksh*), *ukshati*, 'scatter in drops, sprinkle, make water.' [*raksh* only in perf. V., p-V.; P., D.]
- uksh*, see under *2 vaksh*.
- uc*, 'like to do, delight in'; *ucita*, 'suitable, just right.' [V., p-V.; P., D.]
- ujjh*, see *2 hā* (under *1 hā*).
- uñch*, 'glean.' [*pra-uñc*, 'verwischen,' BR.: 'wischen' original meaning, F. p-V.; P., D.]
- u(n)d*, 'spring (of water), flow out; wet, bathe.' [V., p-V.; P., D.]
- ubj*, 'hold or bend down, compress.' [V., p-V.; P., D.]
- ubh*, 'hold together, bind, fetter.' [V., p-V.; P., D.]
- ush*, see under *1 vas*; (also = *1 vas*, *vac*).
- ūñkh*, only one ex. with *ni*, 'roar or grunt (as an animal eager for food).' [V., p-V.; P., D.]
- urñu*, see under *var*.
- ñh*, see under *vañh*.
- ñh*, *ohate*, 'mark, observe; suppose, judge; be considered as; lie in wait, watch.' [V., p-V.; P., D.]
- ej*, see under *aj*.
- edh*, see under *vardh*.
- esh*, 'glide, creep.' [By Gr. derived from *1 arsh*; 'Vgl. *tsh* und *1, 4 tsh*, BR. V., p-V.; P., D.]
- katt*, see under *karsh*.
- kattth* ('display or proclaim loudly, whence) 'boast, vaunt; extol, praise; blame, revile.' [p-V.; P., D.]
- kath**, 'converse; tell, relate, explain, command.' [Probably fr. *katham*, 'how'; 'declare how.' p-V.; P., D.]
- kād*, only in *caḥḍa kadanam* (Rāmāyana), 'he wrought a destruction' (BR.). [p-V.; D.]
- kān*, 'be contented or pleased; take pleasure in, seek to gain, love.' [V., p-V., P., D. ?]
- Akin:—*kām*, 'desire, long for; love; have sexual intercourse with.' [V., p-V.; P., D.]—*kā* (= *kam*), only

one part. form, 'desire, love.' [V.; D.]—*kāñkśh*, 'desire, long or wait for, expect.' [Irreg. desid. of *kam*. p-V.; P., D.]—*can*, 'rejoice at, delight in.' [Only in two aorist-forms (one doubtful). V.; p-V-D.; D.]

kam, see under *kan*.

kamp, 'tremble, shake.' [V-D., p-V.; P., D.]

Akin:—*kup*, 'be moved, stirred, or agitated, be excited, be angry.' [V., p-V.; P., D.]

1 *kar* (*kṛ*, *skar*), 1, 2, 5, 8 conj'l classes, 'do, make, perform,' etc. [Gr. and F. suppose *skar* (in *askrita*, etc.) to be the original form; first meaning, 'cut, fashion.' In that case it might be akin to *kart*, 'cut;'; *kut* (see *kart*); *chur* 'cut;'; *car*, *cur*, 'split, kill;'; (*karsh*, 'cut the soil (?), plow'). V.. p-V.; P., D.]

Akin:—*kālp*, 'be arranged, be right; accord, agree; (with dat.) be fitted or favorable for, serve to, cause; be arranged, become, happen; (acc.), produce, prepare.' [V., p-V.; P., D.]—*kri*, 'buy.' [Comp. the double meaning of Germ. handeln, 'act, trade.' V., p-V.; P., D.]

2 *kar* (*kṛ*), *cakartī*, 'think of, mention with praise.' [V., p-V.; P., D.] Akin:—*kirt* (*kṛt*)* 'mention, relate, communicate; mention with praise, praise.' [Fr. *kṛti* (2 *kar*), 'mention.' V-D., p-V.; P., D.]

3 *kar* (*kṛ*, *kṛ*, *kṛ*). *kirāti*, 'pour out, scatter, hurl; strew or heap over.' [V., p-V.; P., D.]

1 *kart* (*kṛt*), *kṛntati*, 'cut, cut to pieces, cut off or away, split; destroy.' [See 1 *kar*. V., p-V.; P., D.]

Akin:—*kut*, *kut*, 'split, crush; strike, pound.' [p-V.; P., D.]

2 *kart* (*kṛt*), *kṛṇatti*, 'spin, twist.' [V., p-V.; P., D.]

Akin with it:—*cart* (*cṛt*), 'bind, tie, connect.' [V., p-V.; P., D.]

karp (*kṛp*) = *krap*.

karṣ (*kṛṣ*), 'grow thin or lean.' [V., p-V.; P., D.]

karsh (*kṛśh*), 1 *kārshati*, 'draw, drag, drag along, bend (a bow); draw to one's self or into one's power, overpower; press to and fro, torture; draw furrows, plow.'—2 *kṛshāti*, 'draw furrows, plow.' [BR. give two

roots, but consider them as originally one. Gr. gives one root, and considers 'draw furrows' as the first meaning, from which the others. Possibly to be separated into two roots of which one akin to 1 *kar*, which see. Both V., p-V.; P., D.]

From it (through Prākṛit):—*kāṭṭ*, 'häufeln (Anziehen der Erde um die versetzten Pflanzen):' BR., Nachtr. [Two ex. p-V.; D.]

1 *kāl*, *kalayati*, 'drive, push on; convey, bear; do, perform; provide with; notice, consider.' [p-V.; P., D.]—2 *kāl*, *kālayati*, 'drive or push along.' [p-V.; P., D.]

2 *kāl*, see above.

kālp (*kṛp*), see under 1 *kar*.

kaśh, 'rub, scratch, scratch out or away.' [V. (only AV.), p-V.; P., D.]

kas, 'go, move,' (with *ud*, 'split'). [Only one ex. in simple form. V., p-V.; P., D.]

kā, see under *kan*.

kāñkśh, irreg. desid. of *kam*, see under *kan*.

kāś, 'shine, be lustrous; be visible, appear.' [V., p-V.; P., D.]

Akin:—*akāś*, 'shine.' [By reduplication of *kāś*. p-V.; P., D.]—*caśh*, 'be visible, appear; see, perceive; announce, say (in this sense chiefly with the preposition *ā*, and comp's *vy-ā*, *sam-ā*, etc.).' [By reduplication of *kāś*. Comp. what is said on p. 7. V., p-V.; P., D.]

kāś, 'cough.' [Akin with *kaśh*? p-V.; P., D.]

kṛ (*kṛ*) = 3 *kar*.

kṛt (*kṛt*)*, see under 2 *kar*.

ku = *kā*.

ku(ñ)c, 'be contracted or bent, be rounded or curled.' [p-V.; P., D.]

kut, *kut*, see under 1 *kart*.

kunt, 'be blunt or dull;' (Dhāt. 'be maimed or lame, be lazy'). [Only the part. form *kunthita*, alone or with *vi*, found. p-V.; P., D.]

kuts,* 'revile, scold, show contempt for.' [Fr. *kutas*, 'whence?,' BR. p-V.; P., D.]

kuth, 'stink.' [Only *kuthita* (with *pra*, 'decay'), and once caus. *kothayati*. p-V.; P., D.]

kup, see under *kamp*.

kush, 'tear, tear asunder or out, knead.' [p-V.; P., D?]

kū (*ku*), 'see, behold' (Curt. 64); or 'have in one's mind' (BR.). [Probably in one of these senses giving *kavi*, 'wise, singer,' etc. The only form found is *ā-kvate*, 'intend,' BR. Dhāt. 'sound, shout.' V-D., p-V.; P., D.]

kūj, 'coo, hum, groan,' etc. [V. (only A.V.), p-V.; P., D.]

kūḍ, see *kāl*.

kūṇ, 'contract, shrink together or cower.' [BR., Nachtr. p-V.; P., D.]

kūrḍ, 'leap, play.' [p-V.; P., D.]
Akin with it:—*krīḍ*, 'play, sport, make fun.' [V., p-V.; P., D.]

kāl (*kād*), 'burn, scorch.' [Only five times (RV. *kāḍ*). [V., p-V.; P., D.]

knūy, only one ex. with *abhi*, 'moisten, wet.' [p-V.; P., D.?]

kraksh, 'roar' (?). [Only in part. ātm. Onomatopoeic? V., D.]

krath, 'give vent to joy, be wanton.' [One ex., BR., Nachtr. p-V.; P., D.]

krand, 'neigh, roar, crack, wail.' [V., p-V.; P., D.]

krap (*karp*, *kṛp*), 'long, grieve; moan.' [V., p-V.; P., D.]

kram, 'go, proceed, go through; go or apply one's self to.' [V., p-V.; P., D.]

krī, see under 1 *kar*.

krīḍ, see under *kūrḍ*.

krudh, 'become angry.' [V., p-V.; P., D.]

kruç, 'cry, shriek; cry against, abuse.' [Comp. *kraksh*. V., p-V.; P., D.]

krūḍ, 'make thick' (?). [Only once in the Kāth.-recen'n of Yāj. V.]

klath, 'turn round or form itself into balls' (BR.). [Only one ex., *klathan*, in the Vājasaneyi-saṅh. p-V.; D.]

klam, 'become tried or exhausted or lax; wither, pine.' [Hardly found

except in the partic. form *klānta*, 'tried,' etc. [p-V.; P., D.]

Akin:—*çram*, 'be weary; weary one's self, exert one's self; mortify one's self, perform acts of penance.' [V., p-V.; P., D.]

klīḍ, 'be damp or moist.' [p-V.; P., D.]

klīç, *klīṇāti*, 'torment, injure': *klīçyate*, 'be tormented, suffer.' [p-V.; P., D.]

kvan, 'sound, ring, cry.' [p-V.; P., D.]

kvath, 'cook, boil.' [p-V.; P., D.]

kshañ = *kshan*.

kshād, 'carve or distribute (meat); carve for one's self, take (food), consume.' [Only five ex. (4 V.). V., p-V.; P., D.]

kshan (*kshan*), see under 2 *kshi*.

1 **kshap**, 'be abstinent, do penance.' [Akin to *ksham* through the unauthenticated *kshamp*, 'endure'? p-V.; P., D.]

2 **kshap**, 'destroy,' causat. of *kshi*, which see.

kshan, 'be patient, submit; endure, bear, be contented with; pardon, suffer.' [Comp. 1 *kshap*. V., p-V.; P., D.]

kshar, 'flow, glide; flow apart or away, disappear; pour out' [V., p-V.; P., D.]

From it (as causat.):—*kshal*, *kshalayati*, 'wash off.' [*kshal* (*kshalati*), as a variation of *kshar* given in the Dhāt., but not found. p-V., P., D.]

kshal, see under *kshar*.

kshā (*kshai*), 'burn, parch.' [By Gr. connected with 2 *kshi*, 'destroy': by Brugman, Morphol. Untersuch'n, with *ghas*. V., p-V.; P., D.]

1 **kshi**, 1 *ksheti*, 'dwell, abide': 2 *kshayati*, ('dwell in' whence) 'possess, exercise authority over, rule.' [More original form in *kshā*, 'dwelling,' *kshatra*, 'dominion.' BR. give two roots, but suggest their ultimate identity. V., p-V.; P., D.]

2 **kshi**, 'destroy, annihilate, harm; perish' (Gr.). [Original form *ksha* in *tuvi-ksha*, etc. V., p-V.; P., D.] Causat. of this (BR.): 2 *kshap*, 'de-

- stroy, remove.' [Probably through *ksha*. p-V.; P., D.]
- Akin:—*ksṣāṇ* (*ksṣāṇ*), 'hurt, wound, break;' (ātm.) 'be hurt.' [Fr. original *ksha*? V. (only AV.), p-V.; P., D.]
- ksṣip*, 'throw, hurl; scatter, pour; cast away, reject; despise, scold; (throw and) hit; throw down, destroy; pass away (time); set down.' V., p-V.; P., D.]
- ksṣhu*, 'sneeze.' [Onomatopoeic? p-V.; P., D.]
- ksṣud*, 'pound or stamp, crush by pounding or stamping.' [V., p-V.; P., D.]
- ksṣudh*, 'hunger.' [V., p-V.; P., D.]
- ksṣup*, in one passage in Rāmāṇa: meaning? BR., Nachtr.
- ksṣubh*, 'be moved or agitated (especially of liquids, but also fig.), tremble; stumble (morally).' [V. (only AV.; V-D.); p-V.; P., D.]
- ksṣnu*, 'whet, sharpen.' [V., p-V.; P., D.]
- ksṣvid*, 'produce any inarticulate sound, hum, buzz, roar,' etc. [*ksṣvid*, same meaning, given in Dhāt., but not found used. p-V.; P., D.]
- ksṣvel*, 'leap, play.' [Comp. *khel*. p-V.; D.]
- khac*, 'leap or step forth'(?); *khacita*, 'filled (or mingled) with; furnished or adorned with' (BR., Nachtr.). [p-V.; P.]
- khāñj*, 'limp.' [Only *khāñjan*, twice. p-V.; D.]
- khāṇḍ*,* 'break in pieces, divide; shatter; interrupt; disappoint. delude.' [Fr. *khāṇḍa*, (*khāṇḍ*, 1 ātm., 'break,' not found) 'break, piece.' p-V.; P., D.]
- khād*, 'be firm or hard.' [Only one partic. form. V-D., p-V.; D.]
- khān*, 'dig, dig or root up; bury (= *nikhan*).' [V., p-V.; P., D.]
- khād*, 'chew, eat, devour.' [V., p-V.; P., D.]
- khīḍ* (*skṣhīḍ*, only in infinit. *skṣhīḍam*, AV.), 'press down; be depressed or grieved; be weary or enervated.' [Gr. and F. refer it to *khād*. [V., p-V.; P., D.]
- khud*, 'pene percutor.' [V., p-V.; P.]
- khel*, 'swing, shake, rock.' [Comp. *ksṣel*. p-V.; D.]
- khya*, originally 'behold, see' (BR., Gr.); the simple verb found only in pass. and causat.: pass. 'be known, be noted or famous'; caus. 'make known, announce, reveal; praise.' [Gr. connects it with 2 *ci*. BR. suggest its possible connection with *cakṣh*. V., p-V.; P., D.]
- gaṇ*,* 'count, sum up, number; count as, consider; take into consideration.' [Fr. *gaṇa*, 'flock.' p-V.; P., D.]
- gaṇḍ*,* denom. of *gaṇḍa*, 'cheek.' [Only one ex. p-V.]
- gad*, 'utter, express, speak.' [V. (only AV.), p-V.; P., D.]
- gadh*, only in *gadhita*. with *d*, 'clung to.' and with *pari*, 'clung around, embraced.' [V.; P., D.]
- gam* (*gach*), 'go, move, come; go away, pass; go to (with acc.), attain to.' [V., p-V.; P., D.]
- Varied form:—1 *gā*, *jigāti*, 'go, come; go or attain to.' [V., p-V.; P., D.]
- 1 *gar* (*gā*, *gīr*), *grāṇḍī*, 'call out (to), invoke, hail; proclaim, relate; praise, extol.' [Thus BR.; Gr. connects it with *giri*, 'height, mountain,' and others, and supposes 'raise, exalt' as the first meaning. Comp. 3 *jar*. V., p-V.; P., D.]
- From it:—*garj* (*gāṇḍ*), 'bellow, roar, thunder.' [p-V.; P., D.]—*gard*, 'emit a sound, roar' (Dhāt.). [Only one ex., BR., Nachtr. p-V.]—*garh*, 'complain; make complaint against, blame, accuse.' [V., p-V.; P., D.]—*gur* (*gār*) found simple only in *gārta*, 'approved, welcome, pleasant.' [The comp'd forms all contain the idea 'utter, express.' *gur*, 'express pleasure at, hail'? V., p-V.; P., D.]—*gārdh*, 'praise.' [Only one ex. Fr. *gur*. V.]
- 2 *gar* (*gā*, *gīr*), *gīrāti*, *gīlāti*, 'swallow, devour; eject (= *udgar*).' [V., p-V.; P., D.]

- From it:—*gras*, 'eat, devour, swallow.' [V., p-V.; P., D.]
- 3 *gar* (*jāgar*, intens., only form found), 'be awake or watchful, watch; guard, attend.' [V., p-V.; P., D.]
- garj* (*grj*), see under 1 *gar*.
- gard*, see under 1 *gar*.
- gardh* (*grdh*), 'strive after, covet, be greedy of.' [V., p-V.; P., D.]
- garh*, see under 1 *gar*.
- gal*, 'drip, trickle, fall away, disappear; fall, tumble.' [*gar*, 'sprinkle,' in Dhāt., not found used. p-V.; P., D.]
- galbh*, 'be bold or determined.' [p-V.; P., D.]
- 1 *gā*, see under *gam*.
- 2 *gā* (*gāṣi*), *gāyati*, 'sing; proclaim or sing about in verse, praise in song; sing to (acc.).' [V., p-V.; P., D.]
- gāh*, 'drive into, penetrate; hide one's self, be lost in.' [*gah*, in Dhāt., not found used: comp., however, note to *janh*. V., p-V.; P., D.]
- gu* 'sound' (Dhāt.); only in reduplicated forms, 'cause to sound, speak out, proclaim.' [V., p-V.; P., D.]
- From it:—*guñj* 'hum, buzz.' [Simple form *gu* of Dhāt. not found. p-V.; P., D.]
- guñj*, see under *gu*.
- gunṭh*, 'close, cover.' [p-V.; P., D.]
- gup*,* see under *pā*.
- gu(m)ph*, see under *gushp*.
- gur* (*gr*), see under 1 *gar*.
- gulph*, only one ex. of uncertain meaning. [BR., Nachtr., perhaps = *gumph*, 'form in a series, enjoy by turns' ? p-V.; P., D.]
- gushp*, only in *gushpita* (RV.), 'entwined or twisted together.' [Not given separately by BR. or by Gr.; but referred to *guph*, which is said to be derived from (BR.) or to be identical with (Gr.) *gushp*. See also F., I., p. 77. V.]
- From it:—*guph* (*gumph*), 'twine or string together.' [*guph* only one ex.; *gumph* three, BR., Nachtr. See remark under *gushp*. p-V.; P., D.]
- guh*, 'cover, veil, hide.' [V., p-V.; P., D.]
- gur* (with *ud*, in sense of 'raise') = *gur*.
- gurdh*, see under 1 *gar*.
- gra(n)th*, 'tie or string together, unite, fasten; begin' (BR., Nachtr.). [V., p-V.; P., D.]
- grabh* (*grah*), 'seize, take.' [*grabh* usual form in RV.; *grah* prevailing form in AV., and the only one in the later literature. V., p-V.; P., D.]
- gras*, see under 1 *gar*.
- grah* = *grabh*.
- glah*, 'play with dice, gamble.' [p-V.; P., D.]
- glā* (*glāṣi*), 'be weary, faint, fade; be averse to, dislike.' [By Brugman, Morphol. Untersuch'n, derived from *gal*. V., p-V.; P., D.]
- ghat*, 'be busy with, strive, endeavor; reach, attain, succeed; come to pass.' [V., p-V.; P., D.]
- ghatṭ*, see under *gharsḥ*.
- ghar* (*ghr*), 'besprinkle, drop on.' [V., p-V.; P., D.]
- gharsḥ* (*ghrṣḥ*), 'rub, grind; rub or tear open, make sore; rub in.' [p-V.; P., D.]
- From it:—*ghatṭ*, 'rub or touch gently in passing, graze; strike against, shake, set in motion; touch with words, revile.' [p-V.; P., D.]—*ghush*, same as *gharsḥ*. [Only 2 ex., causat. with *nī*, 'crush by stamping, pound.' p-V.; P., D.]
- ghas*, 'consume, devour, eat.' [V., p-V.; P., D.]
- From it by redupl'n:—1 *jaksh*, *jakshiti*, 'devour, eat.' [V., p-V.; P., D.]
- ghut*, only with *ava*, 'cover, veil' and *ryā*, 'turn round.' [p-V.; P., D.]
- 1 *ghush*, *ghōshati*, 'sound loudly; cry out, announce loudly, proclaim; fill with noise.' [V., p-V.; P., D.]
- 2 *ghush*, see under *gharsḥ*.
- ghurn*, 'move to and fro, shake, waver, quiver.' [p-V.; P., D.]
- ghrā*, 'smell, scent; smell or sniff at; kiss (esp. with *abhī*).' [V., p-V.; P., D.]

ca k, only forms *ca kṭa* (alone or with *pra*), 'terrified, intimidated, trembling;' and (*uc*) *ca kanti*, 'look up, see.' [BR.; Dhāt., 'be contented; resist; shine.' p-V.; P., D.]

ca k ḍ s, see under *k ḍ s*.

ca k ṣ h, see under *k ḍ s*.

ca ṇ c, 'leap, jump.' [p-V.; D.]

ca t, 'be separated or loosed, fall off.' [Comp. *cal* p-V.; P., D.]

ca t, 'hide one's self;' (caus. 'cause to hide;' whence, 'drive or scare away'.) [Uncomp'd only in partic. pr. and past. V., p-V.; P., D.]

ca n, see under *ka n*.

ca n d (?) see *ṣ ca n d*.

ca m, 'take into one's mouth (esp. drink), lap.' [V., p-V.; P., D.]

ca r, 'go, move, travel; go or run through; pass (one's time or life), be; go to, (fig.) practice; attend to.' [V., p-V.; P., D.]

Akin:—*ca l*, 'move one's self, stir, quiver; set one's self in motion, start, set out, depart; march; depart from one's track, get in disorder; swerve, desert (abl.).' [Later form of *car*. V. (only AV.; RV-D.), p-V.; P., D.] —2 *ja r* (*ṣ r*), *ja rati*, 'move on; move near, approach.' [V.]—*ja r i*, 'go, move' (?). [Only in *upa ja r ayati*, 'proceed to,' Gr.; 'extend,' BR. The deriv. *pa ri ja r i*, 'running about,' Gr.; 'running about or spreading around,' BR. V.; P., D.]—*ca l*, only with *ud* (*pra-ud*, *sam-ud*), 'fly or start up, arise.' [Dhāt. 'go.' Found only in partic. pr. and past. p-V.; P., D.]

ca r c, 'repeat; cover over with (also gleichsam verdoppeln, BR.).' [p-V.; P., D.]

ca r t (*cṛ t*), see under 2 *ka r t*.

ca r v, 'crush, chew.' [p-V.; D.]

Akin:—*ca r ṣ ṇ**, 'reduce to powder, crush.' [Fr. *cārṣa* (*carv*), 'dust, powder.' p-V.; P.]

ca l, see under *ca r*.

ca ḍ y=4 *c i*.

1 *c i*, *cinoti*, 'place in order, arrange, pile up, build; collect, gain; set with, cover.' [See note to 2 *c i*. V., p-V.; P., D.]

2 *c i* (*ṣ i*), *ciketi* (early form), *cinoti* classic form), 'observe, gaze upon, investigate, seek.' [Often identified with 1 *c i*; and with *vi-* the meanings ('search out,' etc.) of the two roots are very similar. V., p-V.; P., D.]

Akin:—*c i t*, 'observe, notice: intend, have in view, desire; know, understand; make one's self noticed, appear, be known.' [V., p-V.; P., D.] From this:—*c i n i*, 'think, have an opinion; reflect; think of, reflect upon, consider.' [p-V.; P., D.]—Comp. also *khyā*.

3 *c i*, *cayate*, 'detest, hate; take revenge on, punish.' [Thus BR.; by Gr. not separated from 2 *c i*. Comp. 4 *c i*. V., p-V.; P., D.]

4 *c i* (*c i y*), *cāyati*, 'be timid or apprehensive about (acc.), fear;' (ātm.) 'act timidly or with reverence.' [Comp. 3 *c i*. V., p-V.; P., D.]

c i t, see under 2 *c i*.

c i n t, see under 2 *c i*.

cu ḍ, 'whet, sharpen (Gr.); incite, drive on, speed, procure rapidly; further, help; press with a request, urge, demand; determine.' [V., p-V.; P., D.]

cu p, 'move.' [Only two ex. V-D., p-V.; P., D.]

cu m b, 'kiss.' [p-V.; P., D.]

cu r, 'steal.' [p-V.; D.]

*c u r ṇ**, see under *ca r v*.

c u ṣ h, only in pass., 'boil, flow violently;' caus. 'suck out.' [BR.; Dhāt. 'suck.' [p-V.; P., D.]

ce ṣ ṭ, 'move the limbs, struggle, strive; move, be busy; do; exercise; visit.' [V. (only AV.); p-V.; P., D.]

cy u, 'shake, move, stir, start; go forth or away; flow or fall out, trickle; fall away, perish; bring about, make.' [V., p-V.; P., D.]

1 *ch a ḍ*, *chādayati*, 'cover, veil; conceal, hide; protect.' [V., p-V.; P., D.]

2 *ch a ḍ* (*ch a n d*), see under *ṣ ca n d*.

ch a r ḍ (*ch ṛ ḍ*), 'pour upon, sprinkle' (only one ex.); caus. 'pour out; vomit.' [p-V.; P., D.]

ch ḍ (*co*), 'cut.' [Only with prep'n's. Akin to *khan*? V. (only AV.), p-V.; P., D.]

chid, 'cut off or to pieces, split, pierce; interrupt; destroy.' [I.-Eur. *skid(h)*. V., p-V.; P., D.]
chur, 'scratch or cut in, engrave, etch;' (caus. 'adorn by rubbing; powder'). [See 1 *kar*. p-V.; P., D.]

janh, intens., 'strike with the wings or feet, kick.' [Gr., Nachtr., makes it an intens. of *gah* (= *gāh*), 'hide one's self.' Comp. also Benfey, Gött. gel. Anz., 1866, p. 742, etc. V., p-V.; P., D.]

1 *jaksh*, see under *ghas*.

2 *jaksh*, see under *has*.

jajjh, 'fly or hiss like a spark' (BR.). [Only one pr. part. Comp. next. Onomat. V.]

janj, 'fly or hiss like a spark, glimmer' (?). [Dhāt. 'fight.' Only one pr. part. Comp. *jajhyh*. V.; D.]

jan, 'generate, bear, produce, cause; procure;' (ātm.), 'be generated,' etc. [V., p-V.; P., D.]

jap, 'mutter or whisper; pray to or call in a low voice.' [Comp. *jalp*. p-V.; P., D.]

jabh (*jambh*), 'snap at or seize with the mouth.' [Comp. Kuhn, Zeitschr., I. 123. V., p-V.; P., D.]

Akin:—*jeḥ*, 'gape, yawn; pant, breathe heavily.' [Gr., with Benfey, connects it with *hā*; BR. with *jambh*, *jambh*. V.; P.]—*jrambh* (*jṛmbh*), 'open the jaws, yawn; open (also of flowers), spread, stretch, arise; feel well or at ease (= have elbow-room, BR.); fly back (of a bow, = 'be stretched out, BR.; = snap).' [V., p-V.; P., D.]

jam (?), such a root seems supported by *jamad* in *jamadagni*, but its meaning is unknown. By some considered = *gam*, 'go;' by others said to mean 'consume' (Dhāt.), 'blaze.'

jambh = *jabh*.

1 *jar* (*jṛ*), *jāratī*, *jṛyati*, 'decay, be worn out, moulder, become old or decrepit; be digested, dissolved.' [Originally 'rub to pieces.' Comp. Kuhn Zeitschr. 9, 29, n. 17; Curt. 130. V., p-V.; P., D.]

Akin:—*jarj* (?), *jarjā*, 'mangled, wounded,' found (twice, p-V.), but probably for *jarjarita*, (*jarjara*, *jar*), BR.—*jur* (*jār*), 'decay; become decrepit or old, perish.' [V., p-V.; P., D.]

2 *jar*, see under *car*.

3 *jar*, *jarate*, 'crackle, roar (of the fire); call out; call on, invoke.' [BR.; Gr. 'sing,' whence fig. 'crackle.' Comp. 1 *gar*. V., p-V-D.; P., D.]

Akin:—*jalp*, 'speak indistinctly, mutter; speak about; address.' [Comp. *jap*. V-D., p-V.; P., D.]

jarj (?), see under 1 *jar*.

jalp, see under 3 *jar*.

jas, 'be tired out or exhausted.' [V., p-V.; P., D.]

jagar, see under 3 *gar*.

1 *ji*, *jāyati*, 'gain, gain by victory, acquire, conquer; gain a victory over, vanquish, surpass.' [V., p-V.; P., D.]

From it:—*jyā*, 'conquer, overpower; oppress, fleece, deprive; be oppressed, etc.' [V., p-V.; P., D.]

2 *ji*, *jinoti*, 'enliven, quicken.' [Only in *prā jīnōshi*, RV., 438, 1. Gr. as here; BR. refer it to *prā-jinv*. V.; P., D.]

From it:—*jīnv*, 'stir, be active; stir, enliven; further, promote, favor; grant (prayer), satisfy.' [V., p-V.; P., D.]—*jīv*, 'live; revive; gain one's livelihood.' [By reduplication of *jī*. V., p-V.; P., D.]—*jā*, 'press forward, be stirring or active; set in rapid motion, drive; urge on, stir; further, help.' [Comp. *jīnv*. Fr. earlier *gvi* (*jvi*)? V., p-V.; P., D.]

jinv, see under 2 *ji*.

jiv, see under 2 *ji*.

jur (*jār*), see under 1 *jar*.

jush, 'be satisfied or pleased; be pleased with, enjoy, like, love; resort to with pleasure, dwell in.' [V., p-V.; P., D.]

jū, see under 2 *ji*.

jūt, see *jhat*.

jūr = *jur*.

jūrv, see under *jvar*.

jeḥ, see under *jabh*.

jñā, 'know; perceive, learn; recognize, approve.' [Akin to *jan*? V., p-V.; P., D.]

jyā, see under *1 ji*.

jyut, see *dyut*.

jrambh (*jṛmbh*), see under *jabh*.

jri, see under *car*.

jvar, 'be hot or feverish.' [V-D., p-V.; P., D.]

Akin:—*jārv*, 'consume by heat, scorch, burn.' [Simple form in *ni-jur*, etc. V.; P.]—*jval*, 'glow, blaze; burn.' [Later form of *jvar*. p-V.; P., D.]

jval, see under *jvar*.

jhat, only in *uj-jhātita* (v. 1. *uj-jūtita*), 'brought into confusion.' [p-V.; P., D. ?]

ñā, 'cover' (?); *vi-ñāhita*, 'stamped, marked; laden with.' [BR.; compare also Nachtr. p-V.; P., D. ?]

dām, 'resound as a drum.' [Only one ex. p-V.; D. ?]

dāmb, only with *vi*, 'imitate, equal; mock, fool; distort.' [Dhāt. 'throw, hurl.' p-V.; P.]

dī, see under *2 di*.

dhanak, 'approach' (caus. 'bring, procure'). [p-V.; P., D.]

ñās, 'shake, move to and fro; shake or pour out (fig. a wish).' [According to Gr., from *1 tan*; comp. also unauthenticated *tas* = *upakshpe*. V., p-V.; P.]

tāk, 'shoot forth, dart (esp. of birds), speed.' [V.; P., D.]

tāksh, see under *tvaksh*.

ñāc, only with *d* (and *abhyā*), 'cause to flow (towards).' [p-V.; P., D.]

tāt, 'rumble.' [Only one ex. p-V.; D.]

tād, 'strike, chastise with blows, knock; strike a musical instrument, play; knock against, (whence) partly eclipse; multiply.' [Gr. connects it with *tard*. V., p-V.; P., D.]

1 tñā, *tanoti* (*tanvate*), 'extend, stretch; last; spread, diffuse itself (of light); shine; extend to, grant, cause.' [Curt., 230, and others connect *2 tan*, 'thunder,' as a secondary meaning, with this, but the connections seem forced. BR., Benf., Corssen, Pott and Gr. connect it with *stan*. V., p-V.; P., D.] Akin:—*tāy*, stretch, extend.' [Compare pass. of *tan*. p-V.; P., D.]

2 tñā, see under *stan* (and note to *1 tan*).

tñā, 'relax, let go, grow weary.' [V., p-V-D.; D.]

tāp, 'give out heat, be warm, shine (of the sun); warm, heat, make glowing, shine upon; be burnt or burn up; be pained; cause pain, torture; chastise, mortify.' [V., p-V.; P., D.]

tām, 'lose one's breath, suffocate, faint away, perish, be exhausted; be still or immovable, grow stiff.' [V., p-V.; P., D.]

Akin with it:—*tīm*, 'be quiet or immovable.' [Dhāt., 'be moist or wet.' p-V.; D.]—Comp. also *stīm*.

tār (*tā*, *tir*; *tur* in optat.), 'pass across (esp. a river, etc.), or through or over, cross or speed over;' (fig. 'perform, succeed in; master, overpower; help across, save,' etc.). [V., p-V.; P., D.]

From it:—*tard* (*tṛd*), 'bore thro', cleave, split open; set free.' [V., p-V.; P., D.]—*tīr*,* 'accomplish, perform successfully.' [Fr. *tira* (*tar*), 'shore;' = 'bring to the shore.' Only one ex. p-V.]—*tūr* (*tār*), 'press forward, hurry on; overpower' (Gr.). [Shorter and older form of *tvar* (BR.), which see below. V., p-V.; P., D.]—*turv* (*tār*), 'advance victoriously; overpower, conquer, overtake; help to conquer; save.' [Fr. *tur*. V.; P., D.]—*trd* (*trā*), 'protect, guard, save.' [Originally 'help across.' V., p-V.; P., D.]—*trst*, *trud*, 'be split or rent, burst; be left out or lost' (BR., Nachtr.). [Fr. *tard*. p-V.; D.]—*tvar*, 'speed, hurry.' [Later form of *tur*, which see above. V. (only AV.), p-V.; P., D.]

tārkh, 'suppose; try to form an idea about, conjecture; reflect on, consider, think of; expect.' [Weber, originally 'turn, twist, torquere.' p-V.; P., D.]

tarj, 'threaten; blame, revile.' [p-V.; P., D.]

tarḍ, (*trḍ*), see under *tar*.

tarṣ (*trṣ*, *trṣp*), 'be sated or slaked, be satisfied or pleased.' [V., p-V.; P., D.]

tarśh (*trśh*), 'thirst.' [V., p-V.; P., D.]

tarḥ (*trḥ*, *trṇḥ*), 'crush to pieces, grind, squash.' [V., p-V.; P., D.]

tāy, see under *tan*.

tāv, only once (in AV.), *vitāvati*, for which BR. suggest *vidhāvati*.

tīj, 'be or become sharp; sharpen;' (caus. 'sharpen; goad on, incite.') [V., p-V.; P., D.]

tīm, see under *tam*.

tīr,* see under *tar*.

tū, 'have power, be capable, succeed.' [V., p-V.; P., D.]

tū(ñ)j, 'strike, push, impart a rapid or violent motion to, hurl; press out, hurl forth, squirt out; impel, incite, urge on.' [V.; P., D.]

tūd, 'push, prick, goad, lash, bruise.' [V., p-V.; P., D.]

tūr, see under *tar*.

turv, see under *tar*.

tul, 'lift; lift and weigh, balance, examine cautiously, test; make equal in weight, esteem equal, match, compare.' [Comp. *dul* p-V.; P., D.]

1 *tug*, *trate*, 'drip.' V.; P., D.]

2 *tug*, see under *tush*.

tush, 'become quiet or appeased, be pleased; satisfy, please.' [V., p-V.; P., D.]

Kindred or same root:—2 *tug*, 'be quiet; pacify.' [In two RV., and two AV. passages.]

tūr, see under *tar*.

tyaj, 'leave, abandon, reject; go away from, quit; let go, give up; neglect; give away; send or shoot off.' [V., p-V.; P., D.]

trap, 'be embarrassed or ashamed.' [p-V.; P., D.]

traś, 'tremble, shudder.' [V., p-V.; P., D.]

trā (*trai*), see under *tar*.

trut (*trud*), see under *tar*.

tvakśh, only in *prativakśhāna* (RV.). 'prevailing in power, superior.' [Accord'g to Dhāt. = *takśh*, 'create, effect.' Orig'l form *tvak*, Curt., 235. Comp. the deriv. *tvakśhas*, 'activity, active power, vigor.' V.; D.]

Akin:—*takśh*, 'fashion (esp. of wood, also fig.), build, chisel; create, prepare; cut off, split.' [Comp. note to *tvakśh*. V., p-V.; P., D.]

tvāṅg, 'leap, gallop.' [Only two ex. p-V.]

tvār, see under *tar*.

tvīśh, 'be in violent motion, be agitated; stir up, revive; glitter, sparkle.' [V., p-V-D.; P., D.]

tsar, 'creep; creep up to, gain by sneaking.' [V., p-V.; P., D.]

dañś=daś.

dañś(?), only the caus. from *dañśayas* (RV., 964, 1), 'didst chastize,' Gr. [BR., with Nirukta, refer it to *dañśi* = *karman*. Orig'l meaning 'show, teach' (Gr.). V., p-V-D.; D.]

dakśh, 'do right; be competent or strong.' V., p-V.; D.]

From it (as desid.):—*dtkśh* 'prepare one's self for the performance of a sacred rite (esp. the Soma offering).' [Orig'lly, 'try to make one's self competent.' p-V.; P., D.]

dugh, 'reach, attain to.' [Not found un-comp'd: with *paścd(t)*, 'fall behind, fall short of; añ, 'reach above, pass beyond; d, 'attack, inflict harm; pra, 'fall.' V., p-V.; P., D.]

dañd,* 'chastise, punish.' [Fr. *dañḍa*, 'rod.' p-V.; D.]

dad=1 dā.

dadh=1 dhā.

dan, 'be straight; straighten, correct.' [Only two ex., besides the uncert. desid. *didṇṇasā*, by BR. referred here. V.]

dabh (*dambh*), 'bring harm upon, injure; deceive, betray.' [V., p-V.; P., D.]

dām, 'be tame(d) or gentle; (gen'lly) tame, subdue.' [V., p-V.; P., D.]

Akin:—*yam*, 'hold together or back, check, curb; hold, bear, sustain; lift, swing; hold or reach forth, offer, send forth (of light, voice or song), raise (a cry, etc.); (ātm.) keep quiet or passive, obey, be faithful.' [Through *dyam* fr. *dam*. Comp. Curt. p. 570, Kuhn, 11, 12, etc. It seems hard to reconcile fully the various meanings. BR. in the main as here. Gr., origly 'control by something held out, as by a string or the arm, whence, 'check,' etc., etc. V., p-V.; P., D.] Akin with this:—*yāt*, 'connect, join; (ātm.) join or unite one's self (with), meet; seek to join or to reach, strive towards or after, seek devotedly; join in contest, attack.' [Comp. part. *yata*, from *yam*. V., p-V.; P., D.]—*yāntṛ*,* 'curb, restrain.' [Fr. *yantra* (*yam*), 'restraint.' p-V.; P., D.]—*yū*, *yanti*, *yundte*, 'harness, attach, bind, hold fast; draw to one's self, take possession of; unite, mix.' [V., p-V.; P., D.] From this:—*yuj*, 'yoke, harness (fig. apply, fix, arrange, make use of, employ, etc.); join, connect, (fig.) add; join with (instr.), bring into the possession of, bestow on; order; fix in one's mind, remember,' etc. [V., p-V.; P., D.]—*yudh*, 'join in contest,' i. e. 'fight, combat; fight and conquer.' [Gr. connects it with *2 yu*, 'ward off.' Comp. Curt., Benf., etc. V., p-V.; P., D.]

dam bh = *ab bh*.

day, 'divide, allot; divide asunder, destroy; share, take part in, sympathize; repent (= feel an inner disharmony).' [V., p-V.; P., D.]

Akin:—*4 dā* (*dā*), *dāti*, 'cut, mow; divide.' [V., p-V.; P., D.]—*dān*, 'cut off.' [One ex. (A V. Prāt.); BR., Nachtr. D.]

1 *dar* (*dā*, *dṛ*), *dṛṇati*, 'burst, fall asunder; burst, tear open or to pieces, rend.' [V., p-V.; P., D.]

From it:—*dāl*, 'split, crack; open, blossom.' [p-V.; P., D.]

2 *dar* (*dṛ*), *driyate*, only with *d* (*abhi-d*, etc.), 'regard, heed.' [p-V.; P.]

dari drā, see under *dram*.

dar p (*dṛ p*), 'become mad or crazed; be arrogant' [p-V.; P., D.]

dar bh (*dṛ bh*), 'string together, tie in bunches.' [V-D., p-V.; P., D.]

dar ṣ (*dṛ ṣ*), 'see, perceive (ātm. b. seen, appear).' [Only in gen'l tense V., p-V.; P., D.]

dar h (*dṛ h*, *dṛ ṇ h*), see under *dha*.

dāl, see under *1 dā*.

dā ṣ (*dā ṇ ṣ*), 'bite.' [V., p-V.; P., D.]

dās, 'be exhausted, waste away.' [V. p-V.; P., D.]

From it:—*dās*, only with *abhi*, 'b. hostile to, pursue.' [V., p-V.; P., D.]

dā h, 'burn, consume by fire.' [V. p-V.; P., D.]

1 *dā* (*dā d*, *dā y*), *dādāti*, *dādāte*, *dāti*, *dadmi*, (part. *daddyan*), 'give, bestow grant; put, place, apply, direct; (*dā d*) bring along, bear, keep, preserve.' [V., p-V.; P., D.]

2 *dā*, *dyati*, 'bind.' [V., p-V.; P., D.]

3 *dā* (*dā i*), *dīyati*, only in *ara-dāte* 'purified, pure;' and with *vi-ava* (part. pr. and past), 'be diffused brightly' [Dhāt. 'purify.' p-V.; P., D.]

4 *dā* (*dā o*), see under *dā y*.

dā n, see 4 *dā*, under *dā y*.

dā y = 1 *dā*.

dā ṣ, 'serve or honor (a god); offer grant, bestow.' [*dā ṣ* in *daṣasy*, etc. Curt., p. 64, derives it fr. *dā*, 'give V., p-V-D.; P., D.]

dās, see under *das*.

1 *dī v* (?) see *dī v*.

2 *dī v*, *dévuti*, only with *pari*, 'lament moan.' [Dhāt. 'bring into misery Part. form *dyūna*, referred here, i. *d-dyūna* (?), *pari-dyūna*, 'brought int misery.' p-V.; P., D?]

dī ṣ, 'point out, show; direct, assign bestow (as a gift).' [V., p-V.; P., D.]

dī h, 'smear, spread over, around, plaster; stroke.' [V., p-V.; P., D.]

From it (desid.):—*dī kṣ h*, 'wish to anoint.' [One p-V. ex.]

1 *dī*, *dīyati*, 'fly, soar.' [Comp. 2 *dī v*. V., p-V.; P.]

p-Vedic form:—*dīt*, 'fly.' [Onl with prep'ns. p-V.; P., D.]

2 *dī* (*dī dī*, *dī dī*), see under *dyut*.

3 *dī*, see under *dī kṣ*.

dī kṣ h, see under *dakṣ h*.

dī dī, *dī dī* = 2 *dī*.

didhî = *dhit*.

dîp, see under *dyut*.

dîv (*dîv?*), 'play (about, gen., instr., dat., acc.), play at dice; wager; play, sport; (cast, hurl; beam, shine?).' [The root *dîv* is gen'ly given instead of *dîv* (so Dhât., BR., Gr.), but the theme is always *dîv*-. The inferred and commonly accepted meanings 'cast, beam, shine' seem too questionable (supported, at best, by a single doubtful example). *dîv* becomes *dyâ* in its other forms, as the noun *dîv*, *dyu*. Comp. *dyut*.]

du (*dû*), 'burn, be consumed (fig. by pain, etc.); burn (fig. cause pain or grief, torment, etc.).' [Old form *dunv* in part, etc. p-V.; P. D.]

dugh = *duh*.

dudh, see under *dhâ*.

dul, 'swing, shake.' [Only in part. pr. and past. Dhât. 'raise or lift up, swing.' If so, connected with *tul?* p-V.; D.]

dush, 'be spoiled, become bad or corrupted or defiled; commit a sin.' [V., p-V.; P., D.]

duh (*dugh*), 'milk, extract (fig. an advantage, etc.); yield milk, emit, let flow (fig. things desired, etc.).' [V., p-V.; P., D.]

dû = *du*.

dyut, 'beam, shine.' [If the root *div*, 'shine' is real, then *dyut* would be derived from it (*div* = *diu*). V., p-V.; P., D.]

Akin:—*jyut*, 'shine.' [V-D., p-V.; P., D.]—*dt* (*dtât*, *dtâi*), *dt'âyati*. 'beam, shine; shine forth.' [V., p-V.; P., D.]—*dt*, 'blaze, burn.' [Old causat. of *dt*, above. V., p-V.; P., D.]

drām, only intens. *dandramyamāna*, 'running or wandering about.' [Dhât. 'run about, wander.' p-V.; D.]

Akin:—*darīdrā* (intens. of *drā*, below), 'be poor' (lit. 'wander about as a beggar'). [Set up as a root to explain *darīdrā*, 'beggar.' p-V.]—*1 drā*, *drāti*, 'run, speed.' [V., p-V.; P., D.]—*drū*, 'run, speed; run away; run against, attack suddenly; become flowing, melt.' [V., p-V.; P., D.]—*drâ*, 'hurry after, pursue' (Gr.); 'fetch a blow, hit' (BR.). [Only once in part. *drâpāna*. V., D. (verbal in comp'n).]

1 *drâ*, see under *drām*.

2 *drâ* (*drai*), *drâyati*, 'sleep.' [V-D., p-V.; P., D.]

dru, see under *drām*.

druh, 'harm, seek to harm.' [Originally 'bend'? Probably fr. a root *dhru*, yet found as a verbal. V., p-V.; P., D.]

Akin:—*dhârv* (*dhurv*), 'bend, cause to fall, injure.' [Fr. *dhvar*, below. V., p-V.; D.]—*dhvar* (*dhvr*), 'bend, cause to fall.' [Connected with *druh* through *dhru*, yet found as a verbal. V-D., p-V.; D.]—*hurch*, 'go crookedly, swerve, be lost.' [Fr. *hvar*, below. p-V.; P., D.]—*hru*, 'be bent or crooked.' [By Gr. made identical with *hvar*. V., p-V.; P., D.]—*hvar* (*hvr*), 'bend one's course from the right direction, go crookedly or astray; bend; bend down.' [V., p-V.; P., D.]—*hva*, 'go astray, swerve, be lost; stumble, fall.' [Later form of *hvar*. p-V.; P., D.]

drâ, 'see under *drām*.

dvish, 'hate, loathe.' [V., p-V.; P., D.]

dhan, *dhanv*, see under *dhâ*.

dham (*dham*), 'blow, blow or breathe out; hurl forth; fan; inflate; blow (an instrument); manufacture by blowing, melt.' [By Gr. derived from *dhâ*. V., p-V.; P., D.]

dhār (*dhṛ*), 'hold or bear, support; (fig. contain, confirm; keep, preserve; retain, possess; bring, etc.).' [V., p-V.; P., D.]

From it:—*darh* (*dṛh*, *dṛñh*), 'make firm or constant, fix, fasten; (âtm.) be firm, etc. [V., p-V.; P., D.]

dharsḥ (*dhṛsh*), 'be bold or courageous; have courage (to do), dare.' V., p-V.; P., D.]

dhanv, see under *dhâ*.

1 *dhâ* (*dadh*), *dādhati*, 'put, set, place; (fig. bring; give, assign; cause: bear, hold; fix, determine; assert, etc.).' [V., p-V.; P., D.]

2 *dhâ* (*dhe*), *dhâyati*, 'suck, drink.' [V., p-V.; P., D.]

1, 2 *dhâv*, see under *dhâ*.

d h i (*d h i n v*), 'satisfy, rejoice, please.' [p-V.; P., D.]

d h i (*d i d h i*), 'appear, seem; perceive, consider; wish?' [V., p-V.; P., D.]

Akin:—3 *d i* with *accha*, 'direct one's mind upon, turn affectionately towards.' [In three RV. ex.; for *d h i* perhaps, by faulty writing. V.; P., D.]—*d h y á* (*d h y a i*), 'think of, consider, have in mind.' [V., p-V.; P., D.]

d h i k s h, see under *d i h*.

d h u = *d h á*.

d h u r v = *d h á r v*.

d h á (*d h u*), 'shake, shake off or down, move rapidly to and fro; fan, kindle; shake one's self, bristle up.' [V., p-V.; P., D.]

From it:—*d ú d h*, only in *d o d h a t*, 'rushing, boisterous;' and *d u d h i t a*, 'confused.' [By redupl'n of *d h á*. V.; D.]—*d h a n*, 'cause to run, set in rapid motion.' [By short'g of *d h a n v*, below. V.; P., D.]—*d h a n v*, 'run, flow; cause to run.' [Fr. *d h a v*. V., p-V.; P., D.]—*d h á v*, 'run, flow' V.; P., D.]—1 *d h á v*, 'run, flow, stream forth; run, hasten (to or away or against; swim.' [V., p-V.; P., D.]—2 *d h á v*, 'wash or rub off, cleanse, polish.' [V., p-V.; P., D.]—Comp. also *d h a m* and *d h u p*.

d h á p,* 'fumigate; obscure with mist.' [Den. of *d h á p a*, BR.; caus. of *d h á*, Gr. V., p-V.; P., D.]

d h á r v (*d h u r v*), see under *d r u h*.

d h á s h, in *-d h á s h i t a*, by BR. (Nachtr.) considered to stand for *d h r s h i t a*.

d h m á = *d h a m*.

d h y á (*d h y a i*), see under *d h i*.

d h r a j, 'move or glide on.' [V.; P., D.]

d h v a n s (*d h v a s*), 'fall or dash to pieces, be scattered, be destroyed; be strewn or covered with' (only in *d h v a s t a*). V., p-V.; P., D.]

Akin with it:—1 *d h v a n*, 'be covered or closed.' [V., p-V.; P., D.]

1 *d h v a n*, see under *d h v a n s*.

2 *d h v a n*, *d h v á n a t i*, 'sound.' [V-D., p-V.; P., D.]

d h v a r (*d h v r*), see under *d r u h*.

d h v a s = *d h v a n s*.

n a k s h, see under 1 *a ç*.

n a t, see under *n a r t*.

n a d, 'swing, vibrate; sound, roar, neigh.' ['vibrate' hardly except in caus., 'cause to vibrate or tremble.' Gr. considers it as an intens. and caus. develop't of the meaning 'sound.' V., p-V.; P., D.]

Akin:—*n a r á*, 'roar, cry,' etc. [p-V.; P., D.]

n a n d, 'be satisfied or pleased.' [V., p-V.; P., D.]

n a b h, 'burst, tear.' [V., p-V.; P., D.]

n a m, 'bend, bow; bend or submit to; avoid; change.' [V., p-V.; P., D.]

n a y = *n t*.

n a r t (*n r t*), 'dance, act on the stage.' [V., p-V.; P., D.]

From it:—*n a t*, 'dance.' [p-V.; P., D.]

n a r á, see under *n a d*.

1 *n a ç*, *n á ç a t i*, *n a ç y a t i*, 'be lost, perish, disappear.' [V., p-V.; P., D.]

2 *n a ç*, see under *a ç*.

n a s, 'join, (esp. sexually).' [V.; P.]

n a h, see under 2 *a h*.

n á t h, older *n á d h*, 'be in need, seek help, beg.' [In the older lang. only *n á d h a m á n a*, *n á d h i t a*, *n á t h i t a* (RV. twice). V., p-V.; P., D.]

n i n s, 'kiss, greet' (Gr.). [V.; D.]

n i k s h, 'pierce.' [V. (only AV., except the inf. *vi-níkshē*, RV.); P., D.]

n i j, 'wash, clean.' [Comp. *n a g - n a*, *añj*. V., p-V.; P., D.]

n i (n) á, 'scoff, deride, blame.' [V., p-V.; P., D.]

n i (*n a y*), 'lead, guide, direct; lead or take away; lead on or bring on, bring along, bring into a condition; pass away (time), spend; bring to conclusion, settle,' etc. [V., p-V.; P., D.]

n i á, 'bring together or bring to rest' (?). [Only one RV. ex. BR. make it a denom. of *n i á a*, 'resting-place:' Gr. objects. V.; D.]

1 *n u* (*n á*), *n a u t i*, 'roar, shout, exult; praise in song.' [V., p-V.; P., D.]

2 *nu*, *navate*, 'move, move away.' [V., p-V.; P.]

nu d, 'push, push on or away; drive away, dispel.' [V., p-V.; P., D.]

ne d, only with *ati*, 'foam over, overflow.' [Simple form *nad* in *nadī*, *nada*. p-V., P., D. ?]

pac, 'cook, bake, roast; ripen, complete, digest.' [V., p-V.; P., D.]

pa j, only in perf. intens. with *apa*, 'yield (BR.) or start back terrified.' [V.; P., D.]

pa th, 'speak or read aloud, deliver, mention, declare.' [By some derived fr. *prath*. p-V.; P., D.]

pa n, 'buy in, barter; wager, stake.' [V-D., p-V.; P., D.]

1 *pa t*, *patati*, 'fly, speed through the air; move downwards, fall or sink down; fall upon, attain, hit; fall or happen into.' [V., p-V.; P., D.]

2 *pa t*,* see under 2 *pa d*.

pa th,* 'bring upon a path.' [Only ex. *apipāthayati*. Prob'ly denom. of *pathi*, 'path,' BR.: or orig'l verb, 'go,' Gr., Curt. p-V.; P.]

pa d, 'fall, sink down (esp. by exhaustion), perish; go to, proceed towards, reach.' [V., p-V.; P., D.]

pa n, 'be admirable; admire, praise.' [V., p-V-D.; P., D.]

1 *pa r* (*pr*; *pā r*), *prñāti*, *pīpartī*, *pāryate*, 'fill, sate; nourish, satisfy; bestow, spend liberally (dat. of pers.); be filled,' etc. [Caus. *pārayati*, 'fill; heap over; overwhelm,' in Dhāt. given as a sep'te root. V., p-V.; P., D.]

From it:—*pa r* (*pr*), 'fill entirely, give lavishly; fill up, mix, mingle.' [V., p-V.; P., D.] From this:—*prākṣh* (*prkṣh*), 'fill, sate.' [Thus Gr.; BR. omit the root, referring one only of its three forms to *pa r*. V.; P., D.]—*prā d*, 'fill.' [V., p-V.; P., D.]—Perhaps also *pr t*, which see.

2 *pa r* (*pr*), *pīpāri*, *pīprāti*, 'bring across or to (acc.); fig. further, help; protect, save, conquer,' etc. [V., p-V.; P., D.]

3 *pa r* (*pr*), *priyate*, only with *d* or *ri-d*, 'be busy (about).' [p-V.; P., D.]

pa r (*pr*), see under 1 *pa r*.

pa l p ā l, 'wash in lye.' [p-V.; D.]

1 *pa ṣ*=*spa ṣ*, which see.

2 *pa ṣ*,* *pāṣayati*, 'bind.' [Fr. *pāṣa*, 'rope, fetter.' p-V.; P.]

1 *pa d*, V. *pāti*; V., p-V. *pībati* (gen'ly *pivati*), 'drink.' [V., p-V.; P., D.] From it:—1 *p t*, *pīyate*, 'drink.' [V., p-V.; P., D.]

2 *pa d*, *pāti*, 'protect, keep; watch, observe.' [V., p-V.; P., D.]

Akin:—*gu p*,* 'guard, protect, hide; (gupta, guarded, hidden, secret).' [Only in general tenses. Secondary root from *gopāy* (*go-pā*, 'cow-herd,' 'guard.' V., p-V.; P., D.)—2 *pa t*,* *patyate*, 'master, rule; possess, share in, be fit for.' [Orig'ly causat. of *pati* (*pā*, older *pa*, Curt., 377, Kuhn Zeitschr., 4, 317), 'lord.' But BR. derive *pati* from this *pa t*. V., p-V.; P., D.]—*pā t*,* 'guard, protect.' [By native grammarians considered as a causat. of *pā*; but rather denom. of *pāla* (*pā*), 'guardian.' p-V.; P., D.]

pa l,* see under 2 *pa d*.

pa i = 2 *pa t*.

pa i ṇ ṣ = *pa i ṣ*.

pa i ṇ sh = *pa i sh*.

pa i n d,* 'roll into a lump or ball.' [Fr. *piṇḍa*, 'lump.' p-V.; P.]

pa i n v, see under 2 *pa t*.

pa i b d, only in *pībdamāna*, 'firm, compact.' [V., p-V.; P.]

pa i ṣ (*pa i ṇ ṣ*), 'cut rightly, fashion; adorn, equip.' [p-V.; P., D.]

pa i sh (*pa i ṇ sh*), 'crush, grind.' [V., p-V.; P., D.]

pa i s, 'extend' (?). [Dhāt. 'go.' p-V.; D.]

1 *pa i*, see under 1 *pa d*.

2 *pa i* (*pa i*, *py d* = *pya i*, *pyā y*), *payate* (V.), *pyāyate* (V., p-V.), 'swell, be full or exuberant, flow over, be fat; cause to swell,' etc. [V., p-V.; P., D.]

From it:—*pa i n v*, 'cause to swell or overflow, pour forth; swell, overflow.' [V., p-V.; P., D.]

3 *pī* (*piy*), *pi'yati*, 'abuse, mock, despise.' [V., p-V.; P., D.]

pīd, 'press; oppress, torment.' [V., p-V.; P., D.]

pīy = 3 *pī*.

puth, only in caus., 'crush, dash to pieces.' [p-V.; D.]

push, 'thrive, prosper, bloom; cause to thrive or develop, bring up, nourish, further, increase, exalt; enjoy, receive; display.' [V., p-V.; P., D.]

pā, 'make clean or bright, purify; fig. 'clear by thinking, discriminate, think out, invent; express clearly; atone.' [V., p-V.; P., D.]

pāj, 'honor, receive with honor, adore.' [V-D., p-V.; P., D.]

pāy, 'putrefy, stink.' [V-D., p-V.; P., D.]

pār, 2d caus. form of 1 *par* (*pṛ*).

pyā (*pydy*, *pyai*) = 2 *pī*.

praksh, see under 1 *par*.

prach, 'ask for, inquire about, seek; seek or solicit.' [V., p-V.; P., D.]

prath (*pṛth*), 'spread, extend, diffuse.' [V., p-V.; P., D.]

prā, see under 1 *par*.

prī, 'please, rejoice, cheer; oblige; be pleased,' etc. [Fr. *par*, 'fill, sate, satisfy'? V., p-V.; P., D.]

pru, 'move on, hurry, leap.' [Only with prep'ns *atī*, 'leap over, run away,' etc. Comp. *plu*. V., p-V.; P., D.]

Akin:—*prush*, 'spurt, sprinkle, wet.' [Comp. *plush*, below. V., p-V.; P., D.]—*plu* (*plav*), 'float, swim; hover, fly, run; run away.' [Only once in RV. Later form of *pru*. V., p-V.; P., D.]—*plush*, 'scattersparks, burn; (besprinkle Dhāt.).' [Comp. *prush*, above. V-D., p-V.; P., D.]

pruth (*proth*), 'snort (as a horse), pant.' [V., p-V.; P., D.]

prush, see under *pru*.

proth = *pruth*.

plav = *plu*.

plāy, 'begin, undertake.' [Not really a root, but from *pra* + *i*. See note, p. 17.]

plu (*plav*), see under *pru*.

plush, see under *pru*.

psā, see under *bhas*.

phan, only caus., 'cause to leap; and intens., 'leap, jump.' [Gr. connects it with *phar*, through *pharn*. V., p-V.; P., D.]

phar, see under *sphar*.

1 *phal*, see under *sphar*.

2 *phal*,* *phalati*, 'bear fruit (also fig.); obtain fruit (= reward),' BR. Nachtr. [BR. separate 1, 2 *phal* making the latter den. of *phala*, 'fruit, of which they give no deriv'n. It may perhaps be orig'ly identical with *phal* (comp. *phull*). p-V.; P., D.]

phull,* see under *sphar*.

banh (*bādh*, *vanh*), 'be firm or strong.' [Only once in the causat *banhayante*, 'strengthen; and in the part. *bādha*, with prep'ns. BR. connect it with *barh*. The simple *ba* wanting, except in deriv'ns. V. p-V.; P., D.]

1 *bādh* = *bāndh*.

2 *bādh* = *vādh*.

3 *bādh*, desid. of *bādh*.

bāndh (*bādh*), 'bind, fasten, fetter; make prisoner; unite, combine; connect (in verses), compose; bind or attach or direct (one's mind, etc.) to; bind a sacrificial victim, sacrifice; put on (fruit), strike (roots); produce, cause.' [V., p-V.; P., D.]

1 *barh* (*varh*, *ḅṛh*, *vṛh*), *brhāti*, 'move violently, tear, tear up.' [Without prep'ns only with *māla*, 'root.' V., p-V.; P., D.]

2 *barh* (*ḅṛh*, *vṛh*, *ḅṛñh*, *vṛñh*), *brhāti*, *brñhāti*, 'make fat or strong, strengthen, increase, further.' [V., p-V.; P., D.]

3 *barh* (*ḅṛh*, *vṛh*, *ḅṛñh*, *vṛñh*), *brñhāti*, *vārñhāti*, 'roar, bellow.' [p-V.; D.]

bal, only one intens., 'whirl.' [p-V.]

bād, see under *vādh*.

bādh = *bāñh*.

budh, 'awake, be awake or watchful; (gen'ly) observe, notice, perceive, know, learn to know; consider as.' [V., p-V.; P., D.]

brū, 'speak, say' [V., p-V.; P., D.]

bhaks, see under **bhāj**.

bhāj, 'apportion, distribute; bestow, bring; receive as one's portion, share, enjoy; practice; resort or go to; be attached to, love, worship.' [V., p-V.; P., D.]

From it:—**bhaks**, 'enjoy, consume (in older lang. gen'ly = 'drink; in later lang. = 'eat'), devour.' [V., p-V.; P., D.]—**bhiksh** (old desid. of **bhāj**), 'wish to share, desire, ask for, beg.' [V., p-V.; P., D.]—**śābhāj**, 'honor.' [Fr. **śa** and **bhāj** (**bhāj**), 'sharing.' p-V.; P., D.]

bhāñj, 'break, fracture; bend.' [V., p-V.; P., D.]

bhāt, only a caus. form, 'hire.' [p-V.; D.]

bhān, see under **bhān**.

bhān, 'sound, resound, shout' (BR.). [Curt. 407 and others connect this root, as well as **bhāsh**, with **bhd**. Comp., in regard to this, what is said on p. 7. Gr. defines it 'speak, proclaim.' V.; P.]

From it:—**bhān**, 'speak.' [Comp. note to **bhān**. p-V.; P., D.]

bhānā, 'be hailed or praised' (BR.); 'shine, beam' (Gr. and Dhāt.). [V., p-V-D.; D.]

bhar (**bhr**), 'bear, carry; contain, possess; bear or take away; bring, procure; bear, endure; bear, sustain, nourish; support, keep in one's pay; raise (the voice or a sound).' [V., p-V.; P., D.]

Akin:—**har** (**hr**), 'bear, carry; bring, procure; carry or tear away, seize (unlawfully), rob; take or strip off, sunder, receive (a gift); take hold of, master, overpower; hold back.' V., p-V.; P., D.]

bharj (**bhrj**) = **bharajj**.

bhart, 'threaten, rebuke, berate.' [p-V.; P., D.]

bharv, 'chew, consume.' [Only two ex. Comp. **bhas**. V.; D.]

bharṣ (**bhrṣ**) = **bharaṣ**.

bhāl, only caus. with **nī** and **sam**, 'perceive.' [p-V.; D.]

bhaś, 'bark, bark at.' [p-V.; D.]

bhas, 'chew, crush; consume.' [Comp. **bharv**. V., p-V.; P., D.]

From it:—**psā**, 'chew, devour.' [V. (only AV.); RV. has the verbal **-psā**]; P., D.]

bhā, 'shine, appear.' [Comp. note to **bhan** and **bhāsh**. V., p-V.; P., D.]

From it:—**bhāś**, 'shine, beam; appear, be evident.' [V. (only AV.), p-V.; P., D.]

bhām, 'be wrathful.' [Only two ex. V., p-V.; P., D.]

bhāś, 'speak, say, prattle.' [Curt., 407, and others connect this root, as well as **bhan**, with **bhd**. p-V.; P., D.]

bhās, see under **bhā**.

bhiksh, see under **bhāj**.

bhid, 'split, burst, make a hole in; divide; open (of flowers); interrupt; betray, disclose; set at variance; disturb, change; distinguish.' [V., p-V.; P., D.]

bhisaj, 'heal.' [Second'y root of uncert. deriv'n, and found only in RV.; D.]

bhi, 'fear, dread; be anxious about.' [V., p-V.; P., D.]

From it:—**bhīyas**, 'fear, tremble.' [One ex. in RV. and one in SV.; P., D.]

bhūñksh, once in **bhūñkshita** (Rāmāyana), acc'g to Comment. = **bubhukshita** (**bhuj**); BR., Nachtr.

1 **bhuj**, **bhujāti**, 'bend, turn aside.' [V., p-V.; P., D.]

2 **bhuj**, **bhūñakti**, **bhūñjati**, 'enjoy, have the pleasure or benefit of, use, eat or drink; be deserving; be of service to, serve; pass through (a period).' [V., p-V.; P., D.]

bhur, 'move rapidly to or fro, shake, flicker.' [V., p-V.; P., D.]

Akin (BR.):—**bhuraṣ**, 'gush forth, boil' (?). [Gr connects it with **bharj**. Only in one RV passage.]

bhuraṣ, see under **bhur**.

bhū, 'become, come into existence, arise; happen, take place; come into or be in any state or condition, be.' [V., p-V.; P., D.]

From it:—*bhāśh*, 'be active or stirring, make effort, strive after, prepare;' (caus. 'adorn.') [By BR. divided into two roots: 1, only with prep'ns, and indicating motion; 2, 'exert one's self.' By Gr. as here. V., p-V.; P., D.]

bhāś, see under *bhā*.

bhāñç (*bhāñç*, *bhāñç*, *bhāñç*), 'fall (away or apart or down); disappear, be lost; be separated from or deprived of.' [V., p-V.; P., D.]

Probably akin with it:—*bhresh*, 'totter, stumble.' [V., p-V.; P., D.]

bhājj (*bhājj*, *bhājj*), 'fry, roast.' [V., p-V.; P., D.]

bhāram, 'roam, wander about, move to and fro; turn round; waver, be embarrassed or confused; roam through.' etc. [V-D., p-D.; P., D.]

bhāñç = *bhāñç*.

bhāñj, 'shine, glow, be bright.' [Gr. connects it with *bhāñj*. V., p-V.; P., D.]

bhāñi, 'wound' (BR.); 'be angry, punish' (Gr.). [Only in one RV. passage.]

bhresh, see under *bhāñç*.

manñh, see under *manñh*.

mājj (in Dhāt. *masj*), 'sink or dive down; sink under, be lost, perish; bathe.' [V., p-V.; P., D.]

man (?), only in *manñta*, as noun 'murmuring' (?) [Comp. BR., Nachtr. p-V.; D.]

manñd, 'adorn.' [p-V.; P., D.]

math (*math*), 'stir around or rub violently; excite (fire) by rubbing; churn; beat up; agitate, shake; grind, crush; distress.' [V., p-V.; P., D.]

1 *mād* (*mād*), *mādātī* or *mādatī* (V.), *mādyati*, (orig'ly 'gush forth,' of water: hence gen'ly) 'rejoice, feel (esp. heavenly) bliss, delight, revel, be intoxicated; rejoice, gladden intoxicates.' [BR. give 'rejoice' as the orig'l meaning, and consider 'gush, boil' as a fig. extension of that sense. V., p-V.; P., D.]

2 *mād* (2 *mān*), see under 1 *man*.

1 *man* (1, 2, 4, 8 classes), 'mean, think, consider; think of, intend, wish; perceive, know; have consideration for, esteem, honor; approve; be considered, appear.' [Comp. *mā*, with which it is by sense connected. V., p-V.; P., D.]

From it:—2 *mad* (orig'ly 2 *mān*, only form in RV.), *madātī*, ('hesitate') Curt., p. 101: hence), 'tarry, delay, still.' [Comp. Gr., 2 *man*; BR. give *pari-namanyit* under *mād*, and refer the other two Ved. forms *mamandhi* and *amaman* to 2 *mad*, *mand*. They seem, however, to belong to *man* as a verb of the *hu*-class. The RV. form *mamātana*, by BR. referred to 2 *mad*, is by Gr. referred to 1 *mad*.—In Çatap. Brāhm. *madātī* occurs. The two roots ought perhaps rightly to be separated. V., p-V.; P., D.]—*manñr*,* 'speak, utter; take counsel, deliberate; counsel, advice: conjure with a magical formula.' [Fr. *mantra* (*man*), 'instrument of thought (speech, sacred speech or text, counsel, etc.).' V., p-V.; P., D.]—*māñd*, *māñmī*, only with prep'ns: *anu*, 'recognize;' *d*, 'mention; consider,' etc. [Orig'ly indentic. with *man*. V., p-V.; P., D.]

2 *man* = 2 *mād*.

manñr,* see under 1 *man*.

manñh = *math*.

manñd = *mād*.

1 *mar* (*mā*; Dhāt. *mā*), *māñdī*, 'grind, crush.' [V., p-V.; P., D.]

Akin:—2 *mar* (*mā*), *marātī* (V.); *mriyate*, 'die, decess.' [Orig'ly = 1 *mar*? V., p-V.; P., D.]—*marñç*, 'hurt, injure.' [V., p-V.; D.]—*marñh* (*māñh*), 'be destroyed, perish.' [Only one ex. p-V.]—*marñj* (*māñj*), 'rub or wipe off, clean; adorn, prepare properly; (śtm.) cleanse one's self, etc.; wipe off (impurities from one's self) upon some one else (loc).' [V., p-V.; P., D.]—*marññ* (*māññ*), 'crush, thresh.' [V., p-V.; P., D.]—*marñd* (*māñd*), 'press hard, crush, grind to pieces; rub; rub away, annihilate.' [V., p-V.; P., D.]—*marñç* (*māñç*), 'stroke, touch, mulgere; touch mentally, consider, reflect on.' [V., p-V.; P., D.]—*marñksh* (*māñksh*), 'rub, curry.' [V., p-V.; P., D.]—*marñd*, 'rub.' [= *mād*. Only two ex., with prep'ns. V., p-V.; P., D.]—*marññ*, 'decay,

crumble.' [V. (verbal), p-V.; P., D.]
—*mīā* (*mīāi*), 'decay, wither, languish.' [Fr. 2 *mar*? Comp. Brugman, Morphol. Untersuch'n (*mr + ā*). V., p-V.; P., D.]

2 *mār* (*mṛ*), see under 1 *mar*.

marc, see under 1 *mar*.

marcḥ (*mṛcḥ*), see under 1 *mar*.

marj (*mṛj*), see under 1 *mar*.

mard (*mṛd*), 'be mild or gracious (towards), pardon, spare.' [Akin to *mard* in sense of 'stroke gently'? Comp. *mred*. V., p-V.; P., D.]

marṇ (*mṛṇ*), see under 1 *mar*.

marḍ (*mṛḍ*), see under 1 *mar*.

marḍh (*mṛḍh*), 'be weary, neglect; forget, forsake, contemn.' [V., p-V.; P., D.]

marṣ (*mṛṣ*), see under 1 *mar*.

marsh (*mṛsh*), 'forget, neglect; bear patiently.' [Comp. *nardh*. V., p-V.; P., D.]

maḥ, 'elate, delight, cheer, stir up; esteem highly, honor; (ātm.) rejoice, etc. [Orig'ly 'be great or high.' V., p-V.; P., D.]

Akin:—*mañh*, 'be grand or happy (Gr.); bestow (= make rich or happy), give.' [V., p-V.; P., D.]

1 *mā*, *māte*, *mimīte*, *māyate*. 'measure, mete; measure out, grant; arrange, form, build.' [Some derive *man*, 'think' from this root (*ma*); comp. *mī* below. V., p-V.; P., D.]

Akin:—1 *mī*, *minoti*, 'build, erect, establish; measure; estimate, recognize, perceive.' [V., p-V.; P., D.]

2 *mā* (1 *mī*), *mindī*, 'low, bleat.' [The form *vi-māyanate*, RV., 886. 10 is by RV. referred here; but by Gr. to a root *may*, 'go.' V., p-V.; P., D.]

mārg,* see under *mṛg*.

1 *mī*, see under 1 *mā*.

2 *mī* (2 *mī*), *minati*, *mīyate*, 'diminish, lessen, annul; injure, transgress, frustrate; miss (one's way); (ātm.) be diminished, etc. [V., p-V.; P., D.]

1 *mīksh*, see under *mīṣ*.

2 *mīksh* = *myaksh*.

mīgḥ = *mīh*.

mīth, 'meet, unite; meet as rivals, wrangle; revile.' [V., p-V.; P., D.]

mīd, 'become fat (fig. richly rewarded).' [V., p-V.; P., D.]

Akin:—*mīnd*, 'be attached to or drawn towards, feel affection for.' [Comp. in sense *smih*. BR. do not separate *mīd*, *mind*; but as each is found with its distinctive meaning only, and *mind* is not Vedic, a separation seems called for. Identified derivat's, *meda*, etc., point only to *mīd*. p-V.]

mīnd, see under *mīd*.

mīl, 'unite, meet, come together; occur.' [p-V.; P., D.]

Akin:—*mīl*, 'close (up the eyes), wink; vanish; collect.' [V., p-V.; P., D.]

mīṣ (?) only in the desid. form:—*mīksh*, 'mix, stir up, give a relish to; (ātm.) be mixed.' [Thus BR.: Gr. (with the nat. comment'rs) considers *mīksh* as a desid. of *mīh*, and meaning 'besprinkle, give relish to.' V., p-V.; P., D. (i. e. *mīṣ*).]

Akin:—*mīṣṛ*,* 'mix.' [Fr. *mīṣra* (*mīṣṛ*), 'mixed.' p-V.; P., D.]

mīṣṛ, see under *mīṣ*.

mīsh, 'open the eyes; blossom.' [V., p-V.; P., D.]

mīh (*mīgḥ*, *megḥ*), 'pour out, make water, sprinkle; emit seed.' [*mīgḥ* (*megḥ*) only in *nīmeghamāna*, twice in RV. The form *mīksh* by Gr. and nat. comment'rs referred here as a desid., is by BR. referred to *mīṣ*, which see V., p-V.; P., D.]

1 *mī* = 2 *mā*.

2 *mī* = 2 *mī*.

mīl, see under *mīl*.

mīv, 'move.' [Only with prep'na. V. (only AV.), p-V.; P.]

mūc, 'loosen, set free; let go; (ātm.) be loosed or set free.' [V., p-V.; P., D.]

From it:—1 *mōksh*, *mokshate*, set, free, deliver.' [Desid. treated as a sep'te verb.]—2 *mōksh*,* *mokshayati*, 'set free, deliver, wrest away; let flow.' [Fr. *moksha* (*muc*), 'release.' p-V.; P., D.]

mūd, 'be glad or joyous, take pleasure.' [V., p-V.; P., D.]

murch = *mārch*.

muśh, 'steal, rob, plunder.' [V., p-V.; P., D.]

muḥ, 'be lost, wander; be perplexed or embarrassed, lose one's presence of mind, stupid; fail.' [V., p-V.; P., D.]

mārch (*murch*), 'become firm or solid or strong, take shape; become torpid or senseless, faint away; grow firmer or stronger or more intense; cause to sound powerfully.' [V. (only AV.), p-V.; P., D.]

mūl,* *mūlati*, only with *nd*, 'be rooted up, be eradicated' [*mūl*, 'be rooted or firm. Fr. *mūla*, 'root.' p-V.; P., D.]

mṛg,* *mṛgayate*, 'chase, pursue; hunt; seek.' [Fr. *mṛga*, 'deer.' V., p-V.; P., D.]

megh = *mih*.

1 *māksh*, desid. of *muc*, which see.

2 *moksh*,* see under *muc*.

mnā, see under *man*.

myāksh (2 *miksh*), 'be fixed (in), be' (BR.); 'sparkle, micare' (Gr). [As second'y root, but whence? V.; P.]

mṛāksh (*mṛksh*), see under 1 *mar*.

mṛād, see under 1 *mar*.

mṛit, see under 1 *mar*.

mṛuc, only with *nī* (*abhi-nī*), 'go down, set (of the sun).' [Dhāt. 'go.' Comp. *mṛuc*. V. (RV. only verbal), p-V.; P., D.]

From it:—*mṛuc* 'go down, go to rest.' [*nī-mṛuc*, also 'go down.' V., p-V.; P., D.]

mṛed, only caus. with *d*, 'repeat;' and ātm. with *upani* (comp. *mard*), 'gladden, make happy.' [p-V.; P.]

mṛā (*mṛai*), see under *mar*.

mlich (*mlech*), 'speak barbarously, talk an unintelligible or foreign language.' [p-V.; D.]

mluch, see under *mṛuc*.

mlup, said to be another form of *mluc*; only in *upamlupta*, *abhimlupta*, 'concealed, withdrawn.' [p-V.; P.]

mlech = *mlich*.

yāksh, only with *pra*, 'speed (press onward; strive after, attain to [By Gr. connected with a lost *ya* and O. H. Germ. *jagon*. V., p-V-D. P., D.]

yāj, 'honor, worship; worship with sacrifices or oblations, sacrifice.' [V p-V.; P., D.]

yāt, see *yam*, under *dam*.

yāntṛ,* see *yam*, under *dam*.

yābh, 'future.' [p-V.; P., D.]

yām, see under *dam*.

yās, 'seethe, boil, bubble; make exertion;' (esp'ly with *d*, 'make exertion; strive, trouble or weary one's self' [V., p-V.; P., D.]

From it:—*yesh*, 'boil up or overgush.' [Only three ex. [V., p-V. P., D.]

yā, see under *i*.

yāḥ, see under *i*.

yād, see under *i*.

1 *yū*, see *yam*, under *dam*.

2 *yū*, *yuyoti*, 'remove, separate, protect (from abl.); ward off; stay away; be separated.' [V., p-V.; P., D.]

From it:—*yuch*, 'yield, turn (go away;)' (with *pra*, 'be absent; be careless'). [By Gr. treated as a form of 2 *yū*. V.; P.]

yuc, see under 2 *yū*.

yuj, see *yam*, under *dam*.

yudh, see *yam*, under *dam*.

yup, 'make smooth or level; efface; obliterate; confuse.' [V., p-V.; P. D.]

yesh, see under *yās*.

rañh, 'cause to flow, hasten on (ātm.) flow on.' [The form *rañgi* alluded to by Kālidāsa, but nowhere found in real use. V., p-V.; P., D.]

Akin:—*lahgh*, 'leap over, cross; transgress; surpass; ascend.' [Comp. note to *rañh*, above. p-V.; P., D.]

1 *rāksh*, *rākshati*, 'watch, guard, protect, save; heed.' [V., p-V., P. D.]

2 *rāksh*, see under *riḥ*.

rac, 'fabricate, form, make, produce; adapt; *racita*, 'provided (with).' [V., p-V.; P., D.]

1 **raj** (*rañj*), 'be bright or white; glow, redden, be red; (fig.) be affected by any strong feeling.' [BR. give only this *raj*, from which *ráj*, *rája*. etc.; Gr. as here, driving *rája* from two *ráj*. Comp. Curt., 153. V., p-V.; P., D.]

From it:—1 *ráj*, 'be splendid, shine, be distinguished.' [Comp. note to *raj*, above. V., p-V.; P., D.]

2 **raj**, see under 2 *arj* (and comp. 1 *raj*).

rañj = 1 *raj*.

rat, 'give forth a loud sound, howl, cry, roar,' etc. [p-V.; P., D.]

ran = *ran*.

ranv, see under *ram*.

rad, 'scratch or cut (by any instrument), gnaw, crush; dig or open (esp. roads); open (rivers, =) give a free course to (rivers); give, dispense (gifts = give a free course to them).' [Thus Gr.; BR. give same meanings; but a somewhat different develop't: 'scratch; dig (a road); lead (rivers) into a course; lead or bring (something) to (one).' V., p-V.; P., D.]

radh (*randh*), 'be subject to (dat.); subject, deliver into one's (dat.) power; subdue.' [V., p-V.; P., D.]

1 *ran* (*rañ*), see under *ram*.

2 *ran* (*rañ*), see under 2 *rad*.

randh = *radh*.

rap, see under 2 *rad*.

rapç, only with *pra*, 'be sufficient; and *ri*, 'be abundant or exuberant, swell.' [V.; P., D.]

raph, only once in *raphita*, 'injured, miserable' (?). [V.; P., D.]

rabh (*rambh*), 'seize, grasp.' [V., p-V.; P., D.]

From it:—*labh*, 'grasp, catch; procure, find; obtain, receive; possess; grasp mentally, perceive.' [Comp. *lā*. V., p-V.; P., D.]

ram, 'bring to repose, calm, stop; pause, rest, like to stay (by, loc.); be pleased with, take delight in, love; dally with, futuere, couple (of deer); please, make happy.' [V., p-V.; P., D.]

Akin:—1 *ran* (*rañ*), *rañati*, *rañyati*, 'take pleasure, rejoice; delight.' [Comp. 2 *ran*. [V., p-V.; P., D.]—*rañv*, 'delight.' [Fr. *rañ* or denom. of *rañva* (*rañ*), 'agreeable.' Only one ex. V-D.?, p-V.; D.?]—*lam*, 'enjoy (sexually).' [For older *ram*. Only one ex. p-V.; D.]

ramb, 'hang down (loosely).' [V., p-V.; P., D.]

From it:—*lamb*, 'hang down; hang on or from, (with *ava*) depend; cling to, hold to; drink down, lag behind, tarry.' [Later form of *ramb*. p-V.; P., D.]

1 *rambh* = *rabh*.

2 *rambh*, see under 2 *rad*.

1 *ras*, see under 2 *rad*.

2 *ras*,* *rasáyati*, *rasati*, *rasyati*, 'taste.' [Prob'ly *rasayati* from *rasa*, 'juice' and the remaining to later form's, BR. p-V.; D.]

rah, 'leave, give up, surrender;' (*rasika*, 'left, separated, free, without'). [Connected with *radh*? V-D., p-D.; P., D.]

1 *rad*, *ráti*, 'grant, give, give up.' [V., p-V.; P., D.]

2 *rad* (*raí*), *ráyati*, 'bark; bark at.' [Dhāt. 'sound.' Prob'ly orig'ly *ra*, 'sound,' still retained in *are*, an interj'n of calling. Comp. *ras*, below; and F., I., 187. Only three ex. V., p-V.; P.]

Akin:—2 *ran* (*rañ*), 'sound, ring.'

[By BR. classif'd with 1 *ran*, 'delight,' though defined as here, and suggested to be a sep'te root. Formed in analogy with *tan kran*, etc. (see p. 7). p-V.; P.]—*rap*, 'prattle, talk, whisper.' [Later form *lap*, below. V., p-V.; P., D.]—*rambh*, 'roar;' with *upa*, 'fill with sound, make resound.'

[Only two ex. Comp. *ribh*, below. p-V.; P., D.]—1 *ras*, *rásati*, 'give forth a loud sound, roar, yell, neigh,' etc. [Later form *las*, below. p-V.; P., D.]—*ras* (v. 1 *ráç*), 'scream, howl.' [Fr. *ras*, above. p-V.; P., D.]—*riph*, 'utter a rough or burling sound, snarl.' [p-V.; P., D.]—*ribh* (*rebbh*), 'crackle, creak; murmur, prattle; speak aloud, shout (to).'

[With *abhi*, 'bark at.' Comp. *rambh*, above. V., p-V.; P., D.]—1 *ru*, *rautí*, *ruvati*, 'low, roar, yell, hum.' [V., p-V.; P., D.]—*rud*, 'wail, howl, weep; deplore.' [V.,

p-V.; P., D.]—*lap*, 'prattle, talk; murmur; wail.' [Later form of *rap*, above. V. (only AV.). p-V.; P., D.]
—*las*, 'sound.' [Fr. *ras*, above.
Comp. note to *las*. p-V.; P.]

1 *rāj*, see under 1 *raj*.

2 *rāj*, see under 2 *arj*.

rādḥ, see under *ardh*.

rāṣ = *rās*.

rās (v. l. *rāṣ*), see under 2 *rā*.

rī (*rī*), see under *ar*.

rikh, 'scratch, tear.' [V. (only one ex. *ārikha* in RV.); in the later language *likh*. Comp. *rīṣ*. V., p-V-D.; P., D.]

Later form:—*ikh*, 'scratch, furrow; mark by scratching, engrave, inscribe, write, paint.' [V. (only AV.), p-V.; P., D.]

rīñkh, see under *riñg*.

rīñg, 'creep (of infants), move slowly.' [p-V.; D.]

Akin:—*rīñkh*, 'creep (of children), go slowly.' [One ex. p-V.; D.]

rīc, see under *ar*.

rīp, 'smear; deceive.' [V., p-V-D.; P., D.]

From it:—*lip* (*limp*), 'smear, soil; stick on, glue to.' [V., p-V.; P., D.]

rīph, see under 2 *rā*.

rībḥ (*rebh*), see under 2 *rā*.

rīṣ (*arṣ*), 'tear or pluck off; graze; break, hurt.' [Gr. connects this and the following with *ar*, giving *arṣ* (*ṛṣ*) as the interm't form. The only ex. of *arṣ* is *arṣasāna*, which BR. give sep'ly as an adj. of uncert. deriv'n. They refer *arṣ* to *rīṣ*, but without noticing it there. V., p-V.; P., D.]

Akin:—*īṣ*, 'tear or pluck off; hurt.' [p-V.; P., D.]—2 *rākṣh*, 'hurt, injure.' [Prop'ly *rīkṣh* = *rīṣ*, *rīsh*, BR. Only in one AV.-passage (RV.-D.); D.]—*rīsh*, 'be hurt or wounded; meet with disaster, fail, miscarry; hurl, harm.' [V., p-V.; P., D.]

rīsh, see under *rīṣ*.

rīh, 'lick, caress.' [V., p-V.; P., D.]
Later form:—*īh*, 'lick; lick up, sip.' [p-V.; P., D.]

rī = *rī*.

1 *ru*, see under 2 *rā*.

2 *ru*, *rāvale*, 'break or dash to pieces.

[V., p-V.; P., D.]

From it:—*ruj*, 'break, shatter; afflict, pain.' [V., p-V.; P., D.]—*ruth*, 'torment.' [Only part. *ātṁ*. p-V.]—*rup*, 'suffer racking pain.' [Later form *lup*, 'break,' below. V. (only AV.; RV.-D.); p-V.; D.]—*lu p*, 'break to pieces; pounce upon; oppress; rob, plunder.' [V. (only AV.), p-V.; P., D.]—*lā*, 'cut, cut off or down, cut to pieces, destroy.' [p-V.; P., D.]

ruc (*ruṣ*, in *ruṣant*), 'shine, beam, display splendor, be adorned; appear beautiful (to, dat.), be pleasing, please (dat.); be pleased, desire (dat. or acc.); make bright or resplendent.' [Comp. *varc*. V., p-V.; P., D.]

Akin:—*lok*, 'see, perceive.' [p-V.; P., D.]—*loc*, 'see, look.' [Only with prep'ns. p-V.; P., D.]

ruj, see under 2 *ru*.

ruṭh, see under 2 *ru*.

rud, see under 2 *rā*.

1 *rudh*, see under *vardh*.

2 *rudh*, *ruṇadhi*, 'stop, check, arrest; withhold, retain; sustain; enclose, cover; stop up, fill; oppress.' [V-D., p-V.; P.]

rup, see under 2 *ru*.

1, 2 *ruṣ* = *ruc* and *rush*.

rush (*ruṣ*), *rushati* or *ruṣati*, 'be crossed or vexed, be angry; displeasure, disgust.' [V., p-V.; P., D.]

ruh, see under 1 *vardh*.

rākṣh,* 'make thin or lean; smear, soil.' [By BR. derived from *rākṣha* (fr. *rāsh*), 'rough, dry, lean, arid.' The connection between *rāsh* and *rākṣh* in all senses does not seem clear. p-V.; P., D.]

rāp,* 'give form or shape to, represent.' [Fr. *rāpa*, 'form.' p-V.; P., D.]

rāsh, 'strew or cover with dust; smear.' [Mostly in *rāshita*. Comp. *rākṣh*.* p-V.; P., D.]

rej, 'shake, cause to tremble, stir; tremble, quiver, flicker.' [V., p-V.; P., D.]

reḍ, only in pr. part. with *a*, 'non fallens' (BR.). [p-V.; D.]

rebh = *rībḥ*.

1, 2 *lakṣh*,* see under *lag*.

lag, 'adhere, stick; clasp; follow closely; meet.' [V-D, p-V.; P., D.]

Akin with it:—1 *lakṣh*,* *lakṣhay-ak*, 'mark, denote; consider; notice, perceive, see.' [Fr. *lakṣha* (*lag*), 'mark.' p-V.; P., D.] From this:—2 *lakṣh*, *lakṣate*, 'notice, perceive.' [p-V.]—*liṅg** (only with *d*, and one *liṅga*), 'clasp the limbs.' [Fr. *liṅga* (*lag*), 'limb.' Also one *liṅg* of 10 class, 'inflect according to gender.' p-V.; P., D.]

laṅgh, see under *raṅh*.

lajj, 'be ashamed, blush.' [p-V.; P., D.]

lap, see under *2 rā*.

labh, see under *rabh*.

lam see under *ram*.

lal, 'play, sport, dally.' Causat. 'loll the tongue.' [p-V.; P., D.]

lašh, 'wish, desire.' [p-V.; P., D.]

1 *las*, 'shine, glitter; appear; play.' [BR. also refer 2 *las*, 'sound' here; but this comes no doubt from 1 *ras*, 'roar, sound,' which root never means 'shine.' p-V.; P., D.]

2 *las*, see under *2 rā*.

lā, 'take, grasp.' [Only in *lāva*. Comp. *labh*, *rabh*. p-V.; P., D.]

likh, see under *rikh*.

liṅg,* see under *lag*.

lip (*limp*), see under *rip*.

liç, see under *riç*.

lih, see under *rih*.

1 *li*, *liyate*, 'cling or press closely to, adhere or stick; settle down or perch upon; cower down or hide in; disappear.' [Gr. connects it with *rt*, *ar*; but the meanings are too different. V., p-V.; P., D.]

2 *li*, only intens. *lelīyati*, 'totter, shake, tremble.' [p-V.; P., D.]

luñc, 'pluck, pull, pull out, peel.' [p-V.; P., D.]

1 *lut*, *loṭhāyati*, 'plunder, rob.' [Only three ex. p-V.; P., D.]

From it:—1 *luṇṭh*, *luṇṭhayati*, 'rob, plunder; peel.' [BR. make it caus. of 1 *luṭh*. p-V.; P., D.]

2 *luṭh*, see under *lut*.

lud, see under *lut*.

1, 2 *luṇṭh*, see 1 *luṭh*, and *lut*.

lup, see under *2 ru*.

luḥh, 'be perplexed or in disorder; (gen'l'y) desire eagerly (= be disturbed in mind, BR.; F., p. 201.); allure (= *pratilubh*):' *lubdha*, 'desiring, covetous, greedy.' [V., p-V.; P., D.]

lul, 'stir about, agitate.' [p-V.; P., D.]

Akin:—2 *lut*, *luṭhāti*, 'roll, welter.' [p-V.; P., D.]—*lud*, only caus., 'stir, stir up, set in motion, make uneasy.' [p-V.; P., D.]—2 *luṇṭh*, *luṇṭhati*, 'stir up, set in motion.' [BR. make 1 *luṇṭh* a caus. of this. p-V.; P., D.]

lā, see under *2 ru*.

lok, see under *ruc*.

loc, see under *ruc*.

vañh = *bañh*.

1 *vak* = *vac*.

2 *vak*, 'roll, revolve.' [V., p-V-D.; D.]

From it:—*vañc*, 'proceed by regular motion or crookedly, totter, reel, roll on; sneak along.' [V., p-V.; P., D.]

1 *vakṣh* = 1 *ukṣh*.

2 *vakṣh*, 'grow, become great or strong.' [Only in perf. and caus. V.; P., D.]

Weakened form:—2 *ukṣh*, 'grow up, grow strong.' [V.; P., D.]

vac (1 *vak*), 'speak, say, tell, declare, announce; blame.' [V., p-V.; P., D.]

vaj ('be active or strong, be powerful') only in caus. (*vāj*), 'urge to speed, spur, incite; speed.' [Thus Gr.; BR. make *vāj* in all cases a denom. of *vāja* (*vaj*). Comp. Kuhn's Zeitschr. 3, 335; and Curt. 159. V., p-V.; P., D.]

vañc, see under 2 *vak*.

vanṭ, 'divide.' [Only one ex. p-V.; D.]

vat, with *api*, 'receive mentally, comprehend.' [Only 3 ex. V.; D.]

va d, 'speak, say, declare, name.' [V., p-V.; P., D.]

From it:—*vand*, 'praise, honor, greet.' [V., p-V.; P., D.]

va d h (*bad h*), 'slay, kill, destroy.' [Acc'g to Pāpini only in aor. and prec.; but found also in fut. and pot., in spec. tenses passive, and once *vadhati* (BR., Nachtr.). V., p-V.; P., D.]

From it:—*bād h*, 'press or drive away, dispel; oppress, torment; force apart.' [Comp. Kuhn's Zeitschr. 12, 120; F. 156. The desid. *bībhatsati* set up as a sep'te root 3 *bad h*. V., p-V.; P., D.]—*vyadh* (3 *vid h*), 'pierce, penetrate, smite, shoot, wound; injure, harm; goad on, incite; shake, move.' [V., p-V.; P., D.]

va n, see under 3 *va d*.

va n d, see under *va d*.

1 *va p*, *vāpati*, 'shear, graze.' [V., p-V.; P., D.]

2 *va p*, *vāpati*, 'strew, scatter, sow.' [V., p-V.; P., D.]

va m, 'vomit, eject.' [V., p-V.; P., D.]

1 *va r* (*vr*, *vṛ*), 'envelop, cover, enclose, surround; confine, obstruct; restrain, check, guard.' [See note to 2 *var*, below. V., p-V.; P., D.]

Akin:—*āru*, 'surround, wrap.' [Fr. *var* through *vr̥ṣoti*. By Gr. not sep'd fr. *var*. V., p-V.; P., D. ?]—*varṣ*,* 'paint, depict.' [Fr. *varṣa* (*var*). 'paint.' p-V.; P., D.]

2 *va r* (*vr*, *vṛ*) 'choose, prefer, wish, love.' [Perhaps from 1 *var*, as 'enclose mentally.' BR. as here. Dhāt. gives only one *vr* (*vr̥ṣoti*, *vr̥ṣati*, *varati*) for 'eligere, tegere,' etc. Comp. also *varj*. V., p-V.; P., D.]

va r j (*vrj*, *vr̥j*), 'turn, twist; turn over (the sacred grass, Gr.: BR., untwist and strew it out); turn away; divert; (śtm.) appropriate, choose.' [V., p-V.; P., D.]

va r ṇ,* see under 1 *va r*.

va r t (*vr̥t*), 'turn, roll, roll on (fig. pass on, take place; tarry in a place, exist, live; be (as a reg. copula); proceed, act; use,' etc. [V., p-V.; P., D.]

1 *va r d h* (*vr̥dh*), *vārdhate*, *vr̥dhate*, 'raise, increase, strengthen, cause to

grow or prosper; cheer up, animate, inspire; increase, grow, prosper,' etc. [V., p-V.; P., D.]

Akin:—*ar d h* (*r d h*), 'prosper, thrive, succeed; further, cause to succeed, accomplish; satisfy.' [V., p-V.; P., D.]—*ed h*, 'grow, be great, thrive, be happy.' [V., p-V.; P., D.]—*r d h*, 'succeed, be accomplished; accomplish, carry through.' [Comp. *vr̥dh*. V., p-V.; P., D.]—1 *ru d h*, *rōdhati*, 'grow, sprout.' [Only two ex. V., p-V.; P., D.]—*ru h*, 'ascend, mount; grow up, grow, develop, increase, prosper; grow together, heal;' (*rūdhā*, also 'spread abroad, diffused, generally known'). [Fr. *rudh*, above. V., p-V.; P., D.]—*vr d h*, 'stir up, spur on' (BR.). 'be great or strong or powerful' (Gr.). [Comp. *rādh*. Only in a few RV. ex. D.]

2 *va r d h* (?), 'cut off.' [*vārdhapa-yati*, Weber, Kṛṣṇaj. p-V.; D.]

va r s h (*vr̥s h*), 'rain, pour down.' [V., p-V.; P., D.]

va r h = *bar h*.

va l, 'turn, turn to; burst forth, show itself;' (*valita*, 'accompanied by'). [p-V.; P., D.]

va l g, 'go by leaps, jump, speed.' [V. (only AV.); RV.-D.), p-V.; P., D.]

va l h, only with *upa* and *pra*, 'test by a question, propose a riddle to' (BR.). [p-V.; P.]

va ḡ, see under 3 *va d*.

1 *va s*, *ucchati*, 'be bright, shine.' [V., p-V.; P., D.]

From it:—*u s h*, 'burn, consume, destroy; punish.' [V., p-V.; P., D.]

2 *va s*, *vāste*, 'put on a dress or covering, take form, appear; enter into.' [V., p-V.; P., D.]

3 *va s*, *vāsati*, 'stay, dwell, linger, remain; be, pass; devote one's self to.' [V., p-V.; P., D.]

4 *va s*, 'direct (an attack) against, attack.' [V.; P.]

5 *va s*, only with *ni*, 'cut down, kill;' and *pari*, 'cut out.' [p-V.; P., D.]

va h, 'lead, convey, bring, bear, carry, cause; bear, endure; pass (time); cause to flow, carry along or away; travel, ride; blow (of the wind).' [V., p-V.; P., D.]

- From it:—1 *āh*, *āhatī*, 'move, push; change, modify.' [V., p-V.; P., D.]
- 1 *vā*, *vāti*, 'bow; blow on; exhale (incense), spread (of incense).' [V., p-V.; P., D.]
- Akin:—2 *vā* (*vāti*), *vāyati*, 'blow; (gen'ly) be weary or languid, be exhausted (= dying wind, Gr.).'—*vāt* (?) * 'blow, fan.' [Fr. *vāta* (*vā*), 'wind.' Very doubtful form. p-V.]
- 2 *vā*, see under 1 *vā*.
- 3 *vā*, 'desire, seek to win.' [Only in part. and desid. V., p-V.; P., D.]
- Akin:—*vān*, 'like, love, desire; obtain, procure, master, conquer, gain; dispose of, possess; make ready, prepare.' [V., p-V.; P., D.]—*vāc*, 'wish, demand, order; long for; insist upon, assert.' [V., p-V.; P., D.]—*vāñch*, 'desire, love, like; assert.' [V., p-V.; P., D.]—*vān*, 'long, yearn, desire; envy.' [By redupl'n fr. *van*. V., p-V.; P., D.]
- 4 *vā* (*ve*), *vayati*, 'weave, braid; (fig.) compose.' [V., p-V.; P., D.]
- vāñch*, see under 3 *vā*.
- vāt* (?), * see under 1 *vā*.
- vāc* (1 *vāc*), 'low, roar, scream, crow.' [V., p-V.; P., D.]
- 2 *vāc*, * 'fill with odors, perfume, spice.' [Fr. *vāsa*, 'perfume.' Comp. 1 *vā*. p-V.; P.]
- vāh*, only with *pra*, 'press.' [p-V.; P.]
- 1 *vāc*, 'sever, separate, winnow.' [V., p-V.; P., D.]
- 2 *vāc* = *vāc*.
- vāj*, 'start; dart or jet forth; start back, turn and flee in terror; *vigna*, 'startled, agitated, alarmed.' [V., p-V.; P., D.]
- vāñh* (*vāñh*), 'ask, beg' (?). [Only once: see note, p. 17.]
- vāñ* (*vāñ*), 1 *vāñ*, 'find, discover, get, obtain, bring about, find (a wife), marry; seek, turn to; feel, consider; befall, concern:—2 *vāñ*, 'find out, learn to know; perceive, know, understand; know as, declare, call; notice; experience; believe, suppose.' [In *Mahābhār.* *vāñ* used in sense of *vāñ*, BR. Both forms V., p-V.; P., D.]
- 1 *vāñ*, *vāñ*, 'be devoted to, worship, honor; present as a devotional offering, dedicate; be propitious' (Gr.). [V., p-V.; P., D.]
- 2 *vāñ* (*vāñ*), *vāñ*, 'be empty, be wanting or lacking (instr.).' [V., (p-V., *Vālakhyā*); D.]
- 3 *vāñ* = *vāñ*.
- vāñ* = 1 *vāñ*.
- vāñ* = 2 *vāñ*.
- vāñ* (*veñ*), 'be in a swinging or trembling motion, tremble, quiver; shudder.' [V., p-V.; P., D.]
- vāñ*, 'settle down, enter, go in, repair (to), go to, fall to (one's, acc.) share; happen into.' [V., p-V.; P., D.]
- vāñ*, 'be active; bring about, perform, do; gain; rule; consume.' [V., p-V.; P., D.]
- 1 *vāñ*, *vāñ*, 'seek with eagerness, strive after; enjoy; grasp, procure; attack.' [V., p-V.; P., D.]
- 2 *vāñ*, *vāñ*, 'impel, set in motion; stir up, incite; send.' [V., p-V.; P., D.]
- 3 *vāñ*, only in intens., 'flutter (of the heart), tremble.' [Orig'ly 'flap with the wings,' BR. Only two ex. V., p-V.; P., D. ?]
- Akin:—*vāñ* (*vāñ*), 'fan, cool by blowing; besprinkle.' [p-V.; P., D.]
- vāñ*, see under *vāñ*.
- vāñ*, 'make firm, fix; be firm or hard.' [V., (p-V. ?); D.]
- vāñ*, * 'act manly or bravely.' [Fr. *vāñ*, 'hero.' V., p-V.; D.]
- vāñ* = *vāñ*.
- vāñ*, see under 3 *vāñ*.
- vāñ* = *vāñ*.
- vāñ* (*vāñ*), 'twine round, cling to; envelop, dress (refl.).' [*vāñ* excep'tly in the older lang. (once *vāñ* in RV., also in AV.). Gr. 'clothe, surround,' and derived from *vāñ* (?). V., p-V.; P.; D.]
- vāñ* (2 *vāñ*), 'embrace, encompass, grasp.' [V., p-V.; P., D.]
- vāñ* = *vāñ*.
- vāñ*, 'stagger, reel, stumble, swerve; be agitated, be disturbed in mind (by pain or fear), despair.' [Simpler form in *vāñ*. V., p-V.; P., D.]

vyadh (3 *ridh*), see under *vadh*.

vyay,* see under *i*.

vyā (*vyāi*), 'cover, envelop.' [V., p-V.; P., D.]

vraj, 'go, proceed, move; go or attain to (any state or condition).' [V., p-V.; P., D.]

vraṇ (*braṇ*), 'sound' (?), Dhāt. [Only in *vraṇānti vraṇas*, Suçruta, 2, 2, 1.—*vraṇ*,* *vraṇayati* is a denom. of *vraṇa*, 'wound'.]

vrad, 'become soft or ripe.' [Only one ex. V.: D.]

vraçc, 'cut off or down, split.' [Comp. *vrka*. V., p-V.; P., D.]

vrādh, see under 1 *ardh*.

vrīd, 'be abashed or ashamed.' [p-V.; D.]

vrud, only *vrūdita*, 'sunk down, lost.' [p-V.]

vlaḡ (*vlaḡ*), 'twist the neck, throttle' (BR.); 'press hard, pursue' (Gr.). [Connected with *varj*? V.; P.]

vli, 'press or cause to fall together.' [V. (only AV.), p-V.; P., D.]

çāṇs, 'speak or repeat in a solemn manner, recite (esp. a verse, etc. to the gods); praise; proclaim, announce.' [V., p-V.; P., D.]

Akin:—1 *çās* (2 *çisḥ*, *çis*, in some forms), 'reprimand, correct, punish (in words), check; command, govern; instruct, teach; praise; announce, confess.' [V., p-V.; P., D.]

çak, 'be able or competent, can; give help, aid, favor, grant, give in.' [BR. give two roots, but suggest that 2 *çak* may be considered as a transit. to 1 *çak*. The desid. *çikeḥ* 'try; learn; help, wish to give,' by some regarded as a sep'te root. V., p-V.; P., D.]

çāṇk, 'be sad or shy; suspect, suppose.' [V-D., p-V.; P., D.]

çat, *çatayati*, 'cut in pieces, cut off, sever.' [By Pāṇini said to be a caus. of 2 *çad*. V. (only AV.), p-V.; P., D.]

1 *çad*, 'fall off or out.' [V. (only AV.), p-V.; P., D.]

Probably akin:—2 *çad*, 'distinguish one's self, triumph, prevail.' [Only in perf. and perf. part. V.]

2 *çad*, see under 1 *çad*.

çap, 'curse, swear; promise on oath; (ātm.) adjure, entreat.' [V., p-V.; P., D.]

çabd,* 'sound; tell, call.' [Fr. *çabda*, 'sound.' p-V.; P.]

1 *çam* (*çim*), *çamyati*, *çimyati*, 'work zealously, busy or weary one's self; prepare, arrange.' [Comp. note to 2 *çam*. *çamyati*, *çimyati* in parallel passages. V., p-V.; D.]

2 *çam*, *çimyati*, 'become quiet or appeased, cease, sink to rest, be extinguished.' [Gr., F. and others consider 1, 2 *çam* identical, in sense of 'weary one's self, grow quiet.' BR. as here. Comp. Curt., p. 104. p-V.; P., D.]

Akin:—*çcam*, 'quiet, smother.' [Probably by faulty writing or from *çam*. Only in one RV. passage.]

3 *çam*, *çamayati*, *çamayati*, with *ni*, 'become aware, perceive, burn, hear, learn.' [By F. referred to 1, 2 *çam*. p-V.; P., D.]

4 *çam*, *çamāti*, 'harm.' [Only one p-V. ex.]

1 *çar* (*çr*), 'break, burst, split; decay.' [Comp. 1 *kar*. V., p-V.; P., D.]

Akin:—*çār*, 'crush, kill.' [Only once (RV.), *çārta*. Gr. as here; BR. give *çārta* sep'ty, without any other definit'n than that of Naighaṇṭ, *kāhipra*. V.]

2 *çar*, only in *çṛta* (also with *d*), 'boiled, roasted.' [Orig'ly 'glow.' The arrangem't followed here in the main that of Gr., who gives *çr* (for *çar*, to which he also refers *çṛta*), fr. which *çrā*, *çṛt*. BR. give *çar* = *çrā*, where *çṛta* is found. They further give two *çṛt*, one 'cook' = *çrā*, and one 'mix, *κεράννμι*, independent. V., p-V.; P., D.]

From it:—*çrā* (*çrās*), only in *crāta*, 'cooked,' and in caus., 'cook, boil, bake.' [Comp. note to *çar*, above. V., p-V.; P., D.]—*çṛt*, 'glow; cook, boil, ripen, finish off, *gar machen* (namentlich den Soma durch warme Milch), Gr. [BR. 2 *çṛt*, as a sep'te root, 'mix (the Soma, etc.)'; comp. note to *çar*, above. V., p-V.; P., D.]

3 *çar* = *çrī*.

1 *ṣarddh* (ṣṛdḥ), *ṣardha(ya)ti*, 'show one's self bold or strong, be defiant, mock.' [V.; P., D.]

2 *ṣarddh* (ṣṛdḥ), *ṣardhate*, 'break wind.' [p-V.; P., D.]

ṣal, see under *car*.

ṣas (2 ṣḍs), 'hew or cut down, slaughter.' [V., p-V.; P., D.]

ṣḍ (ṣi, 3 ṣḍ), 'whet, sharpen; (fig.) make eager or bold or strong; hasten, promote, help; (ātm.) be eager,' etc. [By BR. divided into two roots: see, however, Gr. V., p-V.; P., D.]

Desid.:—*ṣḍn*, *ṣḍāṣati*, 'whet.' [Treated as sep'te root.]

cḍn, see under *ṣḍ*.

1 *cḍs* (2 ṣiṣh, ṣis), see under *ṣaṣ*.

2 *cḍs* = *ṣas*.

ṣi = *ṣḍ*.

ṣiñj, 'give forth a sharp or shrill sound, ring, tinkle,' etc. [V., p-V.; P., D.]

ṣim = 1 *ṣam*.

1 *ṣiśh*, *ṣiśhati*, 'leave, leave remaining;' (gen'ly in pass. *ṣiśhate*, 'be left, remain'). [Rare except with prep'nā, esp'ly vi., 'distinguish,' etc. V., p-V.; P., D.]

2 *ṣiśh*, (*ṣis*) = 1 *cḍs*, see under *ṣaṣ*.

2 *ṣi*, 'lie, lie down or quiet; sleep.' [V., p-V.; P., D.]

2 *ṣi*, 'give way, disappear, be destroyed.' [p-V.; P., D.]

3 *ṣi* = *ṣḍ*.

4 *ṣi* = *ṣyḍ*.

ṣikh, 'sprinkle, drizzle.' [p-V.; D.]

*ṣil**, 'do habitually, practice, enjoy.' [Fr. *ṣla*, 'habit.' p-V.; P., D.]

ṣuc, 'flame, shine, beam; glow, burn (fig. be pained, grieve, wail, etc.).' [Thus BR.; by others divided into two roots. Comp. *ṣubh*, *ṣudh*. V., p-V.; P., D.]

ṣuj, only in *ṣujāna*, 'boasting or self-reliant?'. [V.]

ṣu(n)ḍh, 'purify.' [Comp. *ṣuc*, *ṣubh*. V., p-V.; P., D.]

ṣu(m)bh, 'shine, glitter; adorn, beautify. attire; prepare, make fit;

(ātm.) adorn one's self,' etc. [BR. give a sep'te root *ṣubh*, 'glide or pass on nimbly,' to explain a few RV. passages, by Gr. referred here; and they omit 'shine' from this *ṣubh*. Comp. *ṣuc*, *ṣubh*. V., p-V.; P., D.]

1 *ṣuśh*, *ṣuśhyati*, 'dry, dry up, wither, languish.' [V., p-V.; P., D.]

2 *ṣuśh*, see under *ṣvas*.

ṣū (later *ṣvḍ*, *ṣvi*), 'swell, increase, grow; be thriving or powerful.' [Thus Gr.; BR. refer Ved. forms in *ṣḍ*- to a sep'te root 1 *ṣḍ*, 'be superior or victorious;' and later forms in *ṣḍ*-, *ṣvay*-, etc. to *cḍḍ* (*ṣvi*, 2 *ṣu*), 'swell.' V., p-V.; P., D.]

ṣūr, see under 1 *car*.

ṣcand (later *candḍ*), only the intens. form *candīcādāt*, 'shining.' [By BR. referred to *cand*; by Gr., as it seems with better reason, to *ṣcand*. *ṣcandra* and *candra* point to both these root-forms, and BR. give *ṣcand* as the original one. V., p-V-D.; P., D.]

Akin:—2 *chā(n)d*, *chāndati*, *chād-ayati*, 'appear, seem; seem good, please; try to seduce.' [V., p-V.; P., D.]

ṣcam, see under 2 *cam*.

ṣcut (*ṣcyut*), 'drip, trickle.' [V., p-V.; P., D.]

ṣnath, 'pierce, penetrate.' [Prob'le earlier form *knath* given, but not found in use. V., p-V.; P., D.]

ṣyḍ (4 ṣḍ), 'curdle, congeal.' [V. (RV. only *ṣla*), p-V.; P., D.]

ṣrath, 'become loose or weak, yield, crumble; weaken, make defenceless.' [V., p-V.; P., D.]

Later form:—*ṣlath*, 'become loose, crumble, yield.' [p-V.; P., D.]

ṣram, see under *klam*.

ṣra(m)bh (v. l. *srambh*), only with *vi* (mostly alone), 'confide (in, loc.), trust, depend on.' [Mostly *viṣrabha*, 'trusting, confident.' The root alone, 'support one's self, lean,' Gr. V-D., p-V.; P., D.]

ṣrḍ (*ṣraṣ*), see under 2 *car*.

ṣri (3 *ṣar*), *χρίνω*, lean: lean or put (against, upon, etc.); apply, bring; (ātm.) lean one's self (on, loc.); be attached, be found, be; resort to, have recourse to; become.' [V., p-V.; P., D.]

crish, 'join, connect.' [V., p-V-D.; P., D.]

Later form:—*lish*, 'adhere or cling to, clasp, embrace, join.' [p-V.; P., D.]

cri, see under 2 *car*.

1 *cru*, *cr̥oti*, 'hear, listen; be attentive; listen to (a teacher, etc.), learn, find out.' [V., p-V.; P., D.]

From it:—*crush*, 'hear (Gr.), listen to.' [With certainty only in *crushamāna*, by BR. defined 'complaisant, confiding.' *crōshan*, *crōshantu* might also be referred to *cru*. V.; P (?), D.]

2 *cru*, see under *sar*.

crush, see under 1 *cru*.

clath, see under *crath*.

clagh, 'have confidence (in, dat.); speak confidently, boast, be proud; flatter, praise.' [p-V.; D.]

clish, see under *crish*.

cvā(n)c, 'open itself, receive in open arms' BR.; 'bend,' with *ul*, 'arise; open,' Gr. [Only a few RV. forms somewhat differently treated by BR. and Gr., and not all quoted by the former. V.; P., D.]

cvās, 'blow, hiss, pant; breathe; sigh.' [V., p-V.; P., D.]

Akin:—2 *cvsh*, *cvshati*, 'hiss.' [V.; P., D.]

cvā, *cvī* = *cu*, which see.

cvit, 'be white or bright, shine.' [V., p-V-D.; P., D.]

shēiv, 'spit, spit out.' [p-V.; P., D.]

sagh, 'bear, be able to bear; comprehend' (Gr.). [Only in 3 passages. V., p-V.; D.]

From it:—*śah*, 'overpower, conquer, master, check; be able; bear, endure, suffer, allow.' [Though 'bear' seems to be orig'l meaning, 'overpower' is the one prevailing in the RV. V., p-V.; P., D.]

sac (*sac*), see under 1 *sd*.

saj (*sajj*, *sāñj*), see under 1 *sd*.

sāñj = *saj*.

śad, *śidati*, 'sit, sit down; besiege, lie in wait for; sink down (fig. collapse, decay, perish; be despondent, be low-spirited; be distressed or in need, etc.).' [V., p-V.; P., D.]

śan (2 *śad*), 'gain, procure, obtain, possess, procure (for another), bestow.' [V., p-V.; P., D.]

1 *śap*, see under 1 *sd*.

2 *śap*, only in one corrupt passage, *śāpān*, 'futuens' (? BR.). [p-V.; D.]

śabhāj,* see under *bhāj*.

sar (*sr*), 'move or hurry on, glide, flow, flow away.' [V., p-V.; P., D.]

From it:—1 *sarj* (*srj*), *srjati*, 'let loose, send forth, fling, hurl; throw or pour out; let go, set free; publish; procreate, produce, beget; produce, procure, give.' [V., p-V.; P., D.]—*sarp* (*srp*), 'creep, crawl.' [V., p-V.; P., D.]—2 *sr*, *śrāvati*, 'be set in motion; flow apart, be dissolved or disconnected.' [Varied form or incorrect writing for *sr*, below V., p-V.; P., D.]—*śru*, 'flow, stream; trickle; let flow, emit, shed; flow or trickle away, slip away, fail, perish; flow (from), originate.' [V., p-V.; P., D.]

1 *sarj* (*srj*), see under *sar*.

2 *sarj*, *sārjati*, 'creak.' [V., p-V.; P., D.]

sarp (*srp*), see under *sar*.

sac = *sac* (see note).

śas, 'sleep, be inactive or idle.' [V., p-V.; P., D.]

śah, see under *sagh*.

1 *śa* (*so*), *śyati*, 'bind, connect; yoke, fetter.' [Only with prep'ns. esp'y *ava*, 'unbind, unyoke; (fig. desist, cease; stop, stay; abide by, decide upon, etc.).' V., p-V.; P., D.]

Akin:—*sac* (*sac*), 'be connected or associated or together with; be near, belong to; possess; be attached to, serve; follow, seek; pursue.' [Sev'l RV. forms *sacc* occur, referred by both BR. and Gr. to *sac*: only one *saccasi*, in Vāṭakhilya, and the noun *saccat* (RV.), are by BR. referred to a sep'te root *sacc*, 'stop, withhold.' They seem, however, both explainable under *sac*. The two roots (*sac*, *sacc*) should perhaps be considered as

closely connected, but not as identical. V., p-V.; P., D.]—*sa j* (*sa j j*), in pass., by assimil'n; *sa ñ j*), 'cling, be attached or connected, adhere, stick.' [V., p-V.; P., D.]—1 *sa p*, 'adhere or be devoted to; strive after, seek to reach.' [Akin to *sac*, and orig'ly *sakv*, Kuhn, 9, 17. The verb-form *sapary*, 'honor,' not in the Dhât., seems connected with this as a denom. fr. a *sapar* (fr. *sap*). V., p-V.; P., D.]—*s i*, 'bind, twine around; connect.' [By weak'g of orig'l *sa*. V., p-V.; P., D.]—*s i v* (*s i v*), 'bind or stitch together, sew.' [Fr. *si*. V., p-V.; P., D.]—*s e v*, 'be connected with; tarry in a place, stay or dwell in or by; attend to, serve, honor; be attached to, devote one's self to, cultivate, practice; enjoy (sexually).' [Comp. *sac*, above. V., p-V.; P., D.]—*s â t r**, 'tie or string together; declare, etc., in a Sûtra.' [Fr. *sûtra* (*siv*), 'thread.' p-V.; P., D.]

2 *s â* = *sa n*.

s â d h, 'reach the goal or be accomplished, succeed; carry out, adjust, set in order; accommodate one's self, obey.' [V., p-V.; P., D.]

Akin:—1 *s i d h*, *s i d h y a t i*, 'reach goal, be accomplished, succeed; be the valid, be proved; be healed.' [Comp. also 2 *s i d h*, by Gr. connected with this. V., p-V.; P., D.]

s i, see under 1 *s â*.

s i c, 'pour out; emit; sprinkle.' [V., p-V.; P., D.]

1 *s i d h*, see under *s â d h*.

2 *s i d h*, *s â d h a t i*, 'scare or drive away, ward off.' [Thus BR.; by Gr. referred to 1 *s i d h*, 'proceed straight to one's goal,' in a caus. sense, 'drive on or away?' V., p-V.; P., D.]

s i v (*s i v*), see under 1 *s â*.

s u (*s â*): 1 *su*, *su n o t i*, 'press out (esp'ly Soma juice):'—2 *su* (*s â*), *s â v a t i*, *su r â t i*, 'set in motion, cause, produce; destine (for), consecrate, empower:'—3 *su* (*s â*), *s â v a t i*, *s a u t i*, *s â t e*, 'bring forth, generate, beget, bear.' [For the connect'n of these roots comp. Gr.; Curt., p. 397; Pott, Zeitschr., 6, 365; F., p. 230: some excluding 3 *su*. Orig'l meaning 'set in motion, send or bring forth?' All three V., p-V.; P., D.]

*s u k h**, 'gladden, delight.' [Fr. *sukha*, 'joy.' p-V.; D.]

s u (m) b h 'stifle' (?). [Only two ex. p-V.; D. ?]

s â = *su*.

s â c, 'point out, indicate, show, betray.' [By BR. considered as a denom. ? p-V.; P., D.]

*s â t r**, see under 1 *s â*.

s â d, see under *s v a d*.

s â r k s h, 'care for, regard.' [p-V.; D.]

s e v, see under 1 *s â*.

s k a (n) d, 'leap, spring, spirt, be ejected or hurled forth, be spilled, fall out; cover (of animals, bespringen).' [V., p-V.; P., D.]

s k a r = *k a r*.

s k u, 'cover, heap over; protect.' [V., p-V.; P., D.]

s k h a l, 'stumble, reel, falter, slip, err, fail; stammer; stick.' [p-V.; P., D.]

s k h i d = *k h i d*.

s t a n, 'thunder, roar, groan.' [V., p-V.; P., D.]

Akin:—2 *tan*, *tanyati*, 'thunder, resound.' [Comp. note to 1 *tan*. V., p-V-D.; D.]

s t a (m) b h, 'fix firmly, prop up (whence) reach to; check; (âtm.) become stiff or rigid.' [V., p-V.; P., D.]

s t a r (*s t r*, *s t i*), 'strew, scatter. diffuse; spread over, cover; throw away or down (an enemy, etc.).' [V., p-V.; P., D.]

s t â, (*s t a i*), only in *s t i y a n t*, 'stealthy, secret.' [V. (only AV.), p-V. (BR., Nachtr.); D.]

Akin:—*s t e n**, 'steal, rob.' [Fr. *stena* (*stâ*), 'thief.' p-V.]

s t i g h, 'seize, attack.' [See note, p. 17. p-V.]

s t i m, only in *s t i m i t a*, 'heavy, dull, quiet; wet'?. [Comp. *tim*. p-V.; D.]

s t u, 'praise, praise in song, extol.' [V., p-V.; P., D.]

From it:—*s t u b h*, 'shout for joy, exult, praise.' [V., p-V.; P., D.]

*s t e n**, see under *s t â*.

styd (*styai*), 'coagulate, grow thick or solid.' [p-V.; P., D.]

sthag, 'veil, cover.' [p-V.; D.]

sthā, 'stand, stand still; stay, abide, remain, endure, be in any state or situation; abide (by, loc.); desist (from, abl.), etc.; stand or take place upon, mount.' [V., p-V.; P., D.]

snā, snāti, 'bathe, perform ablution.' [V., p-V.; P., D.]

snih, 'be adhesive, be sticky or moist; have affection, be attached (to, loc. or gen.), love.' (Caus. 'smear, anoint, make pliant or submissive,' BR.; 'make fat, melt, whence destroy, kill,' Gr.). [V., p-V.; P., D.]

snu, 'yield any liquid (esp. mother's milk), flow.' [p-V.; P., D.]

spanḍ, 'move with a quick motion, throb, kick.' [V., p-V.; P., D.]

spar (*spr*), 'gain by struggle or contest; save, set free, protect; subdue.' [Comp. Gr. V., p-V.; P., D.]

From it:—*sparḍh* (*sprḍh*), *sṗardh*, 'struggle, compete, rival; strive for.' [V., p-V.; P., D.]—*sparh* (*sprh*), 'be eager to gain, desire; envy.' [V., p-V.; P., D.]

sparḍh (*sprḍh*), see under *spar*.

sparṣ (*sprṣ*), 'touch, feel, stroke; reach, attain, affect; feel, experience.' [V., p-V.; P., D.]

sparh (*sprh*), see under *spar*.

paṣ (*paṣ*), 'see, behold, perceive; consider; (ātm.) live to see, experience.' [*puc* in the pres't formations; *pac* in remaining tenses and caus., but only in the older language. V., p-V.; P., D.]

sṗardh = *sparḍh*.

sphaṭ, see under *sphar*.

sphar, only in caus., 'tear apart, open, spread; draw (a bow).' [p-V.; P., D.]

Akin:—*phar*, only in intens., 'tear its way, advance with might' (?). [Only once in a corrupted and artificial Vedic hymn, 932, 7. BR., with Sāyana refer it to *par*, 'fill; Gr., 'strow,' to *sphur*. V.; D.]—*phal*, 'split, burst; deflect, rebound.' [Comp. also 2 *phal** p-V.; P., D.]—*phull*,* 'expand, blow.' [Fr. *phulla* (1 *phal*), 'burst open.' p-V.; P.]—

sphaṭ, only in *sphātita*, 'split open, torn.' [p-V.; P., D.]—*sphut*, 'split open, burst; expand, blossom.' [Fr. *sphaṭ*. p-V.; P., D.]

sphal, only caus. with *a*, 'strike, slap; hurl; tear;' and *sam*, 'strike on or dash to pieces.' [Comp. *sphar* and *sphur*. p-V.; P., D.]

sphā(y), only in *sphiyante* (BR., Nachtr.), 'are fattened;' and *san-sphāna*, 'growing fat, being fattened.' [By Brugman, Morphol. Untersuch'n, derived fr. 1 *sap*. V-D, p-V.; P., D.]

sphut, see under *sphar*.

sphur, 'impart a sudden motion to, jerk; throb, quiver, tremble; flash, appear suddenly, be revealed.' [Comp. *sphal*. V., p-V.; P., D.]

From it:—*sphul*, only in *sphulita*, 'revealed, appeared.' [p-V.; D.]

spurj (*sphārj*), 'make a low noise, rumble, roar; break forth, appear.' [In latter sense comp. *sphur*. Perhaps 'break forth,' whence 'begin to rumble.' V., p-V.; P., D.]

sphul, see under *sphur*.

smaṛ, 'remember, think of; be mindful of; record, declare, teach; remember with regret, long.' [V., p-V.; P., D.]

smi, 'smile, smile sweetly or with a blush; (whence fig.) bloom (of flowers).' [V., p-V.; P., D.]

syā(n)d, 'flow, run, pass or move on.' [V., p-V.; P., D.]

sra(n)s, 'fall off or asunder, crumble down; hang loosely.' [V., p-V.; P., D.]

sriḍh, 'make a false step, stumble, fail.' [V.; D.]

sriṣ (*sriṣ*), 'fail.' [Only 3 ex. V., p-V.; D.?]]

sru, see under *sar*.

sva(n)j, 'clasp, embrace.' [V., p-V.; P., D.]

svād (*svād*, *svāḍ*), 'make palatable or agreeable, sweeten, spice; taste good; relish, enjoy.' [By BR. divided into two roots: 2 *svād*, 'put aright = tame,' to which *sud*. V., p-V.; P., D.]

Akin:—*ād*, 'sweeten, make agreeable, beautify; bless; put aright,

- heal.' [See note to *svad*. V., p-V.; P., D.]
- svan*, 'sound, rush, roar.' [V., p-V.; P., D.]
- svap*, 'sleep, go to sleep; lie dead.' [V., p-V.; P., D.]
- 1 *svar*, *svirati*, 'emit a sound, resound; sing, praise in song.' [V., p-V.; P., D.]
- 2 *svar*, *scarati*, 'shine.' [V., p-V.; P., D.]
- svad* = *svad*.
- sviḍ*, 'sweat.' [V., p-V.; P., D.]
- had*, 'cacare.' [p-V.; P., D.]
- han*, (*ghan*), 'strike, hit; strike down, slay, kill; destroy, ruin.' [V., p-V.; P., D.]
- From it (desid.):—*hiṃs*, 'hurt, wound, injure.' [V., p-V.; P., D.]
- 1 *har* (*hṛ*), see under *bhar*.
- 2 *har*, (*hṛ*, *hṛ*), *hṛṇīte*, 'be angry.' [Orig'lly *ghar*, 'burn'? V., p-V.; P., D.]
- Akin:—*hṛt*, 'be ashamed, blush.' [V., p-V.; P., D.]
- har(y)*, 'wish, yearn after; love, like.' [V., p-V.; P., D.]
- harsh* (*hṛsh*), 'bristle or become erect (as the hair of the body: hence) be intensely moved (esp. by joy), rejoice:' or the reverse develop't of meaning (BR.). [Probable orig'l form *gharsh* (*ghṛsh*) given, but not quotable, except in deriv'n's *ghṛshu*, etc. Perhaps orig'lly 'be intensely moved,' and connected with 2 *har* and *hary*. V., p-V.; P., D.]
- has*, 'laugh, laugh at, (fig.) bloom (of flowers).' [Comp. *smi*. V. (only AV.; in RV. the verbal *has* and deriv.); p-V.; P., D.]
- From it:—2 *jaskh*, 'laugh.' [By redupl'n. Only two partic. forms. V., p-V.; P., D.]
- 1 *hḍ*, *jihṭe*, 'rush up, run away, yield, turn and flee, run to.' [V. p-V.; P., D.]
- Akin:—2 *hā*, *jahāti*, 'leave, abandon, reject, omit; emit.' [V., p-V.; P., D.] From this:—*ujjh* (fr. *ud* + *hā*), 'leave, abandon; avoid.' [p-V.; P., D.]—*hās*, 'race, contend in running.' [V., p-V.]
- 2 *hā*, see under 1 *hā*.
- hās*, see under 1 *hā*.
- hī*, 'set in motion, impel, cause; promote, favor, honor; procure.' [V., p-V.; P., D.]
- hiṃs*, see under *han*.
- hikḥ*, 'hiccough.' [Onomat. p-V.; D.]
- hiṇḍ*, one ex. of uncert. meaning. [p-V.; P.]
- hīḍ* (*hīḍ*, *hēḍ*), 'be angry or hostile: offend; be frivolous;' (orig'lly 'pull, pluck'?, BR.). [V., p-V.; P., D.]
- hu*, 'pour (esp. clarified butter, BR.: sacrificial libation, Gr.) into the fire, sacrifice.' [V., p-V.; P., D.]
- hurch*, see under *druh*.
- hū* = *hūd*.
- hēḍ* (*hēḍ*) = *hīḍ*.
- hesḥ*, 'neigh.' [Comp. *hresh*. V., p-V.; P., D.]
- hnu*, 'put out of the way, drive away; deny, excuse one's self.' [V., p-V.; P., D.]
- hras*, 'become small, diminish.' [p-V.; P., D.]
- hrāḍ*, 'sound.' [p-V.; P., D.]
- hrī*, see under 2 *har*.
- hru*, see under *druh*.
- hresh*, 'neigh.' [Comp. *hesh*. p-V.; D.]
- hlāḍ*, 'cool or refresh one's self.' [V-D., p-V.; P., D.]
- hvar* (*hṛ*), see under *druh*.
- hval*, see under *druh*.
- hvā* (*hvāi*, *hū*), 'call, invoke.' [Perhaps two verbs: 1 *hu*, from which *hrā*: comp. Brugman, Morphol. Untersuch'n.]

PRECEDING FORMS ARRANGED ACCORDING TO THE FINAL LETTER.

kâ	3 vâ	bhî	sru
1 gâ	4 vâ (ve)	1 mî (= mâ)	hru
2 gâ	çvâ	2 mî (= 2 mi)	plu
châ	hvâ	rî (= ri)	kshu
jñâ	çâ	krî	su (1, 2, 3)
stâ	kshâ	prî	hu
sthâ	1 sâ (so)	bhrî	kû (= ku)
1 dâ	2 sâ (= san)	çrî	jû
2 dâ	psâ	hrî	dû (= du)
3 dâ	1 hâ	1 lî	dhû
4 dâ (do)	2 hâ	2 lî	pû
1 dhâ	i	vlî	bhû
2 dhâ	1 ci	1 vî	drû
mnâ	2 ci	2 vî	brû
snâ	3 ci	3 vî	lû
1 pâ	4 ci	çvî	çû
2 pâ	1 ji	1 çî	sû (= su)
bhâ	2 ji	2 çî	hû (= hvâ)
1 mâ	dhî	3 çî (= çâ)	cak
2 mâ	pi (= pi)	4 çî (= cyâ)	tak
dhmâ	1 mi	hî	1 vak (= vac)
yâ	2 mi	u	2 vak
khyâ	smi	sku	çak
jyâ	ri	gu	çik
styâ	jri	ûrnu	lok
dhyâ	çri	kshnu	dhauk
pyâ (= 2 pl)	vli	tu	hikk
vyâ	çi (= çâ)	stu	tañk
çyâ	1 kshi	du	çañk
1 râ	2 kshi	dhu (= dhû)	tark
2 râ	si	1 nu	rikk
ghrâ	f	2 nu	likh
trâ	đf	snu	sukh*
1 drâ	1 đf	hnu	añkh*
2 drâ	2 đf	1 yu	riñkh
daridrâ	3 đf	2 yu	fñkh
prâ	đđđf (= 1 đf)	cyu	ûñkh
çrâ	dhî	1 ru	sthag
lâ	đđđhî (= dhî)	2 ru	lag
glâ	nî	dru	vlag
mlâ	1 pî	pru	mrg*
1 vâ	2 pî	1 çru	añg
2 vâ	3 pî	2 çru	tvañg

iñg	mlich	bhañj	ntd
riñg	yuch	svañj (= svaj)	pīd
liñg	mlech (= mlich)	sañj (= saj)	krīd
mārg*	āñch	giñj	vīd
valg	vāñch	tuñj (= tuj)	hīd
dagh	uñch	ubj	vrud
sagh	arch	1 arj	lud
glāgh	march	2 arj	kūḍ (= kól)
stigh	mūrch	garj	krūḍ
migh (= mih)	hurch	jarj (?)	reḍ
dugh (= duh)	aj	tarj	mred
megh (= mih)	paj	bharj (= bhrajj)	heḍ (= hīd)
lañgh	bhaj	marj	khand*
argh*	yaj	varj	gand*
ac	tyaj	1 sarj	dand*
khac	1 raj	2 sarj	mand
pac	2 raj	sphurj	pind*
vyac	bhuraj	ujjh	hiñḍ
rac	dhraj	jajhjh	marḍ
vac	vraj	aṭ	gan*
ṣvac (= ṣvañc)	vaj	ghaṭ	pañ
sac	svaj	caṭ	phañ
yāc	bhishaj	jhaṭ	bhañ
ric	saj	taṭ	mañ
1 vic	sabhāj*	naṭ	rañ
2 vic (= vyac)	1 rāj	paṭ	vrañ
sic	2 rāj	sphaṭ	kvañ
uc	bhrāj	bhaṭ	kshañ (= kshan)
kuc	tij	raṭ	kūñ
muc	nij	kuṭ (= kuṭṭ)	mañ
ruc	vij	ghuṭ	varñ*
mruc	ij	sphuṭ	ghūrñ
mluc	vij	juṭ (?)	cūrñ*
ṣuc	tuj	katt	at
sūc	1 bhuj	ghatt	cat
loc	2 bhuj	kuṭṭ	1 pat
añc (= ac)	yuj	vaṇṭ	2 pat*
cañc	ruj	visṭ (= veshṭ)	yat
tañc	ṣuj	cesṭ	vat
vañc	kūj	path	ṣat
ṣvañc	pūj	ruṭh	vāt*
kuñc (= kue)	ej	1 luth	cit
luñc	rej	2 luth	mrit
arc	māj	kunṭh	ṣvit
carc	bhrajj	gunṭh	ṣc(y)ut
parc	lāj	lunṭh	jjut
marc	sāj (= saj)	taḍ	dyut
vraṣc	añj	vriḍ	cint
saṣc	khañj	kshviḍ	art
prach	jañj	īḍ	1 kart

2 kart	sad	gurd	jan
cart	had	kûrd	1 tan
nart	khâd	gadh	2 tan
vart	yâd	dadh (= 1 dhâ)	stan
kîrt*	hrâd	1 badh (= bandh)	dan
kath*	hlâd	2 badh (= vadh)	dhan
gnath	svâd (= svad)	3 badh	pau
path*	khid	vyadh	bhan
math	skhid (= khid)	radh	1 man
vyath	chid	vadh	2 man (= 2 mad)
krath	nid	nâdh	1 ran
grath	bhid	bâdh	2 ran
prath	mid	râdh	van
çrath	klid	vrâdh	1 dhvan
klath	vid (1, 2)	sâdh	2 dhvan
çlath	svid	idh	svan
kvath	ud	sridh	kshan
nâth (= nâdh)	kud	1 vidh	san
mith	cud	2 vidh	han
vith	tud	3 vidh (= vyadh)	dân
kuth	nud	1 sidh	çân
puth	mud	2 sidh	in
pruth	rud	dudh	ven
veth (= vith)	trud	budh	sten*
proth (= pruth)	kshud	yudh	jap
katth	sûd	1 rudh	tap
manth (= math)	ned	2 rudh	rap
granth (= grath)	skand	krudh	krap
arth*	cand (?)	çudh	trap
ad	çcand	kshudh	lap
kad	chand (= 2 chad)	edh	1 vap
skad (= skand)	tand	bandh	2 vap
khad	nand	randh (= radh)	çap
gad	spand	indh (= idh)	1 kshap
1 chad	bhand	vindh (= 2 vidh)	2 kshap
2 chad	mand (= mad)	çundh (= çudh)	1 sap
dad (= 1 dâ)	syand (= syad)	ardh	2 sap
nad	krand	gardh	svap
pad	vand	spardh	âp
1 mad	nind (= nid)	mardh	lip
2 mad	mind	1 vardh	rip
syad	vind (= vid, 1)	2 vardh	vîp
rad	und (= ud)	1 çardh	kship
mrad	çabd*	2 çardh	dîp
vrad	pîbd	gûrdh	kup
vad	ard	spûrdh	gup*
svad	chard	an	cup
1 çad	tard	kan	yup
2 çad	nard	khan	rup
kshad	mard	can	lup

mlup	kam	ghar	tûr
kshup	gam	car	pûr
dhûp*	cam	1 jar	çûr (= 1 çar)
rûp*	çcam	2 jar	sûtr*
vep (= vip)	jam	3 jar	mantr*
kamp	dam	tar	yantr*
tarp	tam	star	miçr*
darp	dam	1 dar	1 kal
sarp	dham	2 dar	2 kal
kalp	nam	dhar	skhal
jalp	yam	1 par	gal
gushp	ram	2 par	cal
raph	kram	3 par	dal
riph	dram	spar	1 phal
gu(m)ph	bhram	phar	2 phal*
gulph	çram	sphar	sphal
dam	lam	bhar	bal
ram	klam	1 mar	bhal
lamb	vam	2 mar	lal
cumb	1 çam	smar	val
skabh	2 çam	1 var	jval
jabh	3 çam	2 var	hval
stabh	4 çam	jvar	çal
dabh	ksham	tvar	kshal
nabh	bhâm	dhvar	il
yabh	tim	1 svar	mil
rabh	stim	2 svar	mîl
grabh	ay (= i)	hvar	çîl
labh	day	1 çar	tul
ribh	nay (= nî)	2 çar	dul
ubh	vyay*	3 çar (= çri)	sphul
stubb	cây (= 4 ci)	kshar	lul
lubh	tây	sar	kûl
çubh	dây (= 1 dâ)	tsar	palpâl
kshubh	sphây	1 har	mâl*
subh	pyây (= 2 pî)	2 har	khel
rebh (= ribh)	pfy (= 3 pf)	âr	kshvel
skambh (= skabh)	knûy	kir (= 3 kar)	hel (= hîd)
jambh (= jabh)	pûy	îr	phull*
stambh (= stabh)	hary	tîr*	av
dam	îrshy*	vîr*	dhav
1 rambh (= rabh)	ar	gur	plav (= plu)
2 rambh	1 kar	cur	tâv (?)
jrambh	2 kar	chur	dhar
çrambh	3 kar	jur	shtiv
cumbh (= cubh)	skar (= 1 kar)	tur	div
sumbh (= subh)	1 gar	sphur	sriv (= srîv)
darbh	2 gar	bhur	siv
galbh	3 gar	gûr (= gur)	jîv
am	jâgar	jûr (= jur)	dîv

mfv	kash	1 raksh	2 las
sriv	bhash	2 raksh	1 vas
sev	lash	kraksh	2 vas
raṇv	bhāsh	praksh	3 vas
dhanv	ish (1-5)	mraksh	4 vas
inv (= in)	pish	laksh*	5 vas
jinv	mish	1 vaksh (= uksh)	khvas (= dhvaṇs)
dhinv (= dhi)	rish	2 vaksh	çvas
pinv	çrish	tvaksh	ças
carv	çlish	niksh	sas
bharv	vish	bhiksh	has
turv	tvish	1 miksh	ās
dhurv (= dhûrv)	dvish	2 miksh (= myaksh)	kās
jûrv	1 çish	fksh	cakās
dhûrv	2 çish (= 1 çās)	dfksh	dās
aç (1, 2)	îsh	dhfksh	bhās
daç	ush	1 uksh	rās
1 naç	kush	2 uksh	vās*
2 naç	1 ghush	rûksh*	çās (= ças)
1 paç (= spaç)	2 ghush	1 moksh	hās
2 paç	jush	2 moksh*	pis
spaç	tush	kûksh	aîs*
bhraç	dush	bhuîksh	taîs
vaç	push	sûrksh	daîs (?)
kâç	mush	1 arsh	sraîs
dâç	rush	2 arsh	dhvaîs
râç (= rās)	prush	karsh (1, 2)	çaîs
vâç	çrush	gharsh	nîs
diç	plush	tarsh	hîs
piç	1 çush	dharsh	kuts*
riç	2 çush	marsh	bharts
liç	dhûsh (= dhṛah)	varsh	1 ah
kliç	bhûsh	harsh	2 ah
viç	rûsh	1 as	dah
îç	esh	2 as	nah
1 tuç	yesh	kas	bah (= baîh)
2 tuç	bhresh	ghas	mah
1 ruç (= ruc)	hresh	jas	rah
2 ruç (= rush)	hesh	das	grah (= grabh)
kruç	piñsh (= pish)	nas	glah
dañç (= daç)	aksh	bhas	vah
bhrañç	caksh	yas	sah
piñç (= piç)	1 jaksh	bhyas	gah
rapç	2 jaksh	1 ras	vah
arç (?)	taksh	2 ras*	dih
karç	ðaksh	gras	snih
darç	naksh	tras	mih
sparç	bhaksh	sras (= sraîs)	rih
bharç (= bhrañç)	yaksh	hras	lih
març	myaksh	1 las	îh

guh	2 ūh	rañh	sparh
duh	jeh	vañh (= bañh)	1 barh
muh	añh (= ah)	arh	2 barh
ruh	jañh	garh	3 barh
druh	bañh	tarh	varh (= barh)
1 ūh	mañh	darh	valh

Corrigenda:—Add to the note, p. 7, etc., 2 *raksh* (A V. alone), *std.*—p. 3, line 23 from top, read 880 for 850.—p. 28, read *dhauk* for *dhank*.—p. 35, read *bhishaj* for *bhisaj*.



ARTICLE II.

ON THE ACCENTUATION OF THE VOCATIVE CASE IN THE RIG AND ATHARVA-VEDAS.

BY WILLABE HASKELL, PH.D., OF NEW HAVEN.

Presented to the Society October 25th, 1877.

THIS paper gives the results of an inquiry into the laws of accentuation of the Sanskrit vocative, as illustrated by the actual practice of the Rig and Atharva-Vedas. All the material of the Rig-Veda has been examined and excerpted, and all that of the Atharvan, but with exclusion of such vocatives as are found also in corresponding passages of the Rik; from such passages only those cases are taken in which the Atharvan has a different reading from our copies of the Rik.

The examination was intended to be exhaustive; but it would be too much to hope that no examples of the vocative have been overlooked or misapprehended. The writer is indebted to Professor Whitney for the means of comparing the printed text of the Atharva-Veda with the readings of the manuscripts, and for many valuable suggestions received during the course of the work.

The general and well-known rule is that the vocative, when accented, has the tone on the first syllable; but that it is accented only at the beginning of a sentence, or, in verse, of a *pāda*—since each *pāda* is accented as if it were a separate sentence. Cases of the vocative accented at the beginning of a sentence, except after a pause, do not easily occur in prose: examples from the prose of the Atharva-Veda are the following:

ā'rja éhi svádha éhi sū'nṛta éhī'rāvaty éhī' 'ti, viii.10.11.

vrā'tya kvā 'vātsīr vrā'tyo 'dakām etc. etc., xv.11.2.

īndra jī'va sū'rya jī'va dēvā jī'vata, xix.70.1.

Of vocatives standing at the head of the sentence or *pāda*, and therefore accented, the Rig-Veda appears to have 1113 cases, and the Atharvan 273, making 1386 in all.

Under this head is to be noted the special case that when, by resolution of a *y* or *v*, the written initial syllable of a vocative is made two, the first of the two alone has the accent, and the syllable, as written, is therefore necessarily circumflexed. The Rig-Veda has but one example of this kind, viz.: *di-aus* (*dyaus*), at vi.51.5a; but the Atharvan has several, viz.: *di-aus* (*dyaus*)* at vi.4.3c; *ji-āke* (*gyāke*) at i.2.2a; and *vi-āghra* (*vyāghra*)† at iv.3.3b; and *vyālu* (v.22.6a) is properly of the same character, although the *pada*-text treats it as a compound, *vi-āla*. These cases do not differ in principle from the actual compound *vi-ānga*, (*samhitā*-text *vyānga*), in the verse last cited. The claim that there is anything special and archaistic in the Rig-Veda example has been refuted by Prof. Whitney in the Proceedings of this Society for May, 1876, p. xx.

The only exception in the Rig-Veda to the general rule for the accent of initial vocatives is the following passage, where such a vocative, standing between two unaccented vocatives, is itself unaccented; (*rtēna mītrāvaruṇāv*) *rtāvṛdhāv* *rtasprcā*, i.2.8b. It must unquestionably be regarded as an error of the tradition.

In the following passages, initial vocatives left unaccented in the MSS. of the Atharvan have been accented in the printed text: *pārjanya*, iv.15.4b; *pāpman*, vi.26.1d; *āpāmārga*, vii.85.1b; *āgne*, xi.1.36b. At v.3.7a, *tisrō* has been changed to *tisro*; at v.13.4c, *āher* has been amended to *āhe*; and at xviii.4.6a, *dhruvē* to *dhrūve*.

Of single vocatives not standing at the beginning of the sentence or *pāda*, and therefore unaccented, the Rig-Veda has 4960 examples, and the Atharvan 1042, making a total of 6002.

In a single passage of the Rig-Veda, *rcā girā māruto dēvy ādīte*: *sādane pāstye mahi*, viii.27.5, where a succession of accented vocatives is broken by the single locative *sādane*, the interior vocative *pāstye* is accented, contrary to the rule.

In RV. iv.10.8b, the *pada*-reading *āgne* is doubtless to be regarded as an error.

In several instances, where all or most of the manuscripts of the Atharvan wrongly accent an interior vocative (either as vocative or as some other case), the printed text has omitted the accent. The following have been noted: *sadānvāh*, ii.14.5d, 6d (MSS. *sadānvāh*); *cittāni*, iii.2.4b (for *cittāni*); *atharvan*, v.11.2c (for *ātharvan*); *ātharvana*, vi.1.1b (for *ātharvana*); *āgvindā*, vi.50.1a (for *āgvindā*); *amitrāh*, vi.67.2a (for *amitrāh*); *kāse*, vi.105.1-3c (for *kāse*); *āpah*, vii.89.3a (for *āpah*); *āja*,

* For the printed text, the wrong accent, *dyaus*, was adopted, because it was given by two of the MSS. first used, and the reason of the circumflex was not then understood. But the other MSS., including all those since compared, are unanimous in reading *dyaus*.

† All the MSS. have *vyāghra*, without accent; which inadmissible reading should have been amended to *vyāghra*, instead of *vyāghra*.

ix.5.15a (for *āja*); *sārya*, xiii.2.7a (for *sā'rya*); *sārye*, xiv.1.16a (for *sā'rye*); *acvīnd*, xiv.1.35c (for *acvīnd*); *agne*, xiv.2.1d (for *agne*); *pitarah*, xviii.3.19a (for *pitārah*); *upabhr̥t*, xviii.4.6b (for *upabhr̥t*); *jātavedah*, xviii.4.11c (for *jātāvedah*); *pitarah*, xviii.4.6d (for *pitārah*); and in like manner *ā'po* might well have been corrected to *āpo* in xi.6.23d, *jātāvedasah* to *jātavedasah* in xviii.4.1a, and *viṣvāmitrā* to *viṣvāmitrā* in xviii.3.83c.

On the other hand, in viii.7.13b, the manuscript-reading *oshadhīh*, as if vocative, has been corrected to *ōshadhīh*.

When two or more interior vocatives occur in the same *pāda*, but not in immediate succession, all are left unaccented, according to the general rule; e. g. *tvām no agne tūva deva pāyūbhīh*, RV. i.31.12a; *yās te manyō vidhad vajra sāyaka* (*pāda*-text, *manyō iti: āvidhat*), RV. x.83.1a. Of this sort the Rig-Veda has 103 vocatives, in 51 *pādas*, as follows: i.31.12a, 17a; 36.6a, 9c; 57.4a; 73.10a; 101.9a; 102.3c; 122.11b; 124.10a; 187.5b: ii.1.11a; 2.9a; 22.4a: iv.2.20a; 5.6a; 34.5a; 37.1a: v.2.11c; 4.6d; 8.6a; 33.3a; 47.7a; 54.4a: vi.8.5c; 13.4c; 17.1c; 50.3b; 62.7d: vii.25.1a; 27.2a; 30.1a, 4a; 68.1a; 74.4c; 90.2b; 92.1a: viii.4.5c; 8.5d; 19.35a; 23.28c; 31.16b; 46.9c, 11c; 50.7c; 80.10b: x.4.4a; 15.12a; 45.9b; 83.1a; 142.3b. The Atharva-Veda has 20 such examples, in 10 *pādas*: viz., i.17.2a: ii.12.3a: iv.4.6a: v.1.9b; 29.2a, 3b: vi.114.3c: ix.2.3a, 4a: xii.1.14c.

When two or three interior vocatives occur in immediate succession, whether independent invocations or combinations of a vocative with a qualifying word, all are left unaccented. The Rig-Veda has 704 such vocatives, in 337 *pādas*, and the Atharvan about 92 vocatives, in 46 *pādas*—the number in the latter varying a little according as we follow the printed text or one or another of the various manuscripts. The cases are too frequent and their treatment too regular to require detailed references here. Examples are: of two successive interior vocatives, *sómāsa indra girvanah*, RV. i.5.7b: of three such vocatives, *tā'v acvīnd bhadrāhasīd supānī*, i.109.4c. In the following examples, one of the vocatives has a genitive connected with it: *sāno sahasah jātavedah*, RV. iii.25.5b: *sahasah sīno aṅgīrah*, viii.60.2a; *indra brahmanah pate*, x.164.4a: and, in one case, a genitive with an adjective; *rājānā maha ṛtasya gopā*, vii.64.2a. In the following passages, each of several successive interior vocatives is accented, contrary to the rule: *gr̥navatō vo vārūna mītra devāh*, ii.29.1c; *ṛcā' girā' māruto dēvy ādīte*, viii.27.5c; *ā' prā yāta māruto vīshno acvīnd*, viii.27.8a; *itā' māruto acvīnd*, viii.83.7c; *yā'm me dhīyam māruta indra devāh*, x.64.12a;* (*kuirāta pr̥'cna upatr̥nya bābhra*) *d' me gr̥nutā' sitā ātikāh*, AV. v.13.5b. In two passages, vocatives are accented after the interjection *hayē*; thus *hayē nāro māruto mṛātā nah*, RV. v.57.8a; *hayē jā'ye mānasā tishṭha ghore*, x.95.1a; in a third, a vocative remains without accent after the same interjection: *hayē devāh*, ii.29.4a.

* By a noteworthy inconsistency, in the following *pāda*, interior *vārūna mītra*, having the same construction with the interior vocatives here accented, are left unaccented.

No instance has been noted of more than three successive unaccented vocatives. In a single anomalous passage, where four interior vocatives occur in succession in the same *pāda*, only the first is left unaccented: *tāsmā agne vāruṇa mītra dryaman*, vii.59.1c.

When an initial vocative is followed by another vocative in the same *pāda*, but not immediately succeeding it, usually the first alone is accented, in accordance with the general rule. The Rig-Veda has 156 such vocatives, in the 76 *pādas* here cited: i.2.1a; 3.4a; 5.6c; 44.5c, 10a; 57.3b; 80.7a; 92.14a; 110.8c; 113.7d; 123.3b; 165.7d; *dyā'vā rākshatam prthivī no ābhvāt*, 185.2-8d: ii.1.15b; 2.6d; 14.8a: iii.14.2b; 15.4d; 20.3a; 21.3b; 24.3a; 32.1a; 37.8c; 53.2d; 58.7a; 61.1a: iv.1.18d; 4.12d; 41.1a, 4a, 5a, 11b: v.21.1c; 36.5d; 40.1-3c: vi.8.6d; 15.14a (*āgne yād adyā viṣo adhvarasya hotah*), 16a; 16.3c; 50.10b; 60.3b; 68.5b; 69.6b: vii.5.8b; 36.4b; 75.2d: viii.19.9b; 20.1b; 23.11a; 24.7c; 38.4-6b; 47.6c; 66.11b: ix.66.3c; 79.3d; 94.5d; 108.9b (*ish-as pate didihī deva devayūh*): x.7.2d; 12.4b, 6d; 30.14b; 53.4c; 80.7c; 97.4a; 100.1a; 112.10b. In a few cases (i.123.3b: v.40.1-3c: viii.24.7c), the initial vocative is a double one, composed of a noun and qualifying word. The Atharvan has a single example of this kind, containing two vocatives, at v.27.12a.

In a very few cases, an interior vocative, or more than one, coördinate with an initial accented vocative from which it is separated by intervening words, is itself accented. The following have been noted: *mītra yātra vāruṇa gātūm ārcatah*, i.151.6b; (*vr̥shākapyi révati*) *sūputra ā'd u sūsnushe*, x.86.13b; *ūrvi nā pr̥thivī bāhule gābhīre*, x.178.2c.

A more anomalous case is: (*āgna indra vāruṇa mītra devāh*) *śārdhah prā yantu mā'ruto 'tā vishno*, v.46.2b, where the adjective *mā'ruta*, qualifying *śārdhah*, is accented, while *vishno* remains regularly without accent. In (*imām me gaṅge yamune sarasvatī*) *śūtudri stōman śacatā pārushny ā'*, x.75.5b, we are probably to read *pārushnyā* (instrumental) instead of *pārushny ā'*, as the corresponding cases in the other half of the verse indicate. In (*ṣunām andhā'ya bhāram ahvayat sā'*) *vr̥kī'r ā'vina vr̥shanā nārē 'ti*, i.117.18b, the accentuation indicates that *nārē* alone is the cry of the she-wolf, and that *ā'vina vr̥shanā* are the utterance of the poet; if all the three vocatives belong to the former, we can hardly avoid amending the reading to *ā'vina vr̥shanā nārē 'ti*.

When the first of several successive vocatives is initial, there is some diversity of usage. If they signify different subjects, we might fairly expect all to be alike accented, since each is an independent invocation. In the majority of cases in the Rig-Veda, viz., 18, they are so; but there are 8 cases in which only the first has the accent. In the Atharvan, of the 5 sets of successive vocatives belonging under this head, all but one are accented as independent.

The examples of successive vocatives signifying different subjects (including independent repetitions of the same vocative), where all are accented, are the following: *pā'shan vishnav évayāvah*, RV. i.90.5b; (*dyāvāprthivī . . .*) *pitar māt'ar*, i.185.11b; *bhā'ratī' le sārāsvatī*, i.188.8a; *ādrśhā vīśvādrśhāh*, i.191.5c,6c; *ādīte mītra vāruna*, ii.27.14a; (*vājā r̥bhukshaṇa*) *indra nā'satyā*, iv.37.8b; *āgna indra vāruna mītra devāh*, v.46.2a; *vāruna mītra āryaman*, v.67.1c: viii.67.4b: x.126.2b; *vāruna mītrā*, v.67.2b; 71.1b,2b,3b: viii.47.1b; *d'dityā rūdrā vāsavaḥ sūdānavah*, x.66.12c; *āraṇyāny āraṇyāni*, x.146.1a; *śērābhaka śērābha*, AV. ii.24.1a; *śērādhuka śērādhā*, ii.24.2a; *mṛōkā' numroka*, ii.24.3a; *sarpā' nusarpa*, ii.24.4a; *d'bayo āndbayo*, vi.16.1a; *indrāgni mītrāvarunau*, xiii.1.31c: *vīśvāmītra jāmādagne vāsishtha bhāradvāja gōtama vā'madeva*, xviii.3.16a,b.

In *snā'do pito mādho pito*, RV. i.187.2a, each vocative is a double one, composed of qualifying adjective and noun; and similarly in *dēva savitah sōma rājan*, AV. vi.99.3c, each of the two double vocatives is composed of a noun and its appositive. On the other hand, we find *bhāga prānetar bhāga sātyarādhaḥ*, RV. vii.41.3a, where each vocative of each pair is accented, and *indrasya sāno çavaso napātah*, iv.37.4c, where each pair consists of genitive and vocative and only the first word of the four has the accent.

In the following examples, where several independent vocatives occur in succession, only the first is accented: *br'haspata indra vārđhatam nah*, RV. iv.50.11a; *dyā'vābhāmī adite trā'sīthām nah*, iv.55.1b: vii.62.4a; *dyaūh prthivī kshamā' rāpah*, x.59.8d, 9e, 10d; *āgne bhrātar vasavo mrlātā nah: vīśva ādityā adite sajāśhāh*, vi.51.5b,c; * *vīśve devāso manusho yāti shēhāna*, x.63.6b; *vīśva ādityā adite manīshī'*, x.63.17b. In the last four cases, the first vocative is a double one, composed of noun and qualifying word. The Atharva-Veda furnishes but a single example, *vīśve devā maruto vīśvavedasah*, vi.93.3b. In *mītra-rājānā varunā*, RV. v.62.3b, the true reading is probably *mītra rājānā varuna*, or *mītrā rājānā varunā*. As the text stands, it is a case under the present head.

When the vocatives consist of a noun with a qualifying adjective or an appositional noun, either before or after it, it seems natural that only the first should receive the accent; and this we find to be true in a great majority of cases: viz., in more than 90 cases out of a total of about 115 in the Rig-Veda, and in 15 out of 19 in the Atharvan.

The passages in which the vocative is accompanied by an adjective or an appositive, where only the first has the accent, are as follows: *vīśve devāsah*, RV. i.3.7b: ii.41.13a: vi.52.7a: x.63.6b; 128.4d,5b; *vīśve yajatrāh*, x.63.11a; *vīśva ādityāh*, vi.51.5c: x.63.17b; *vīśve devāh*, vi.52.13a,17d: ix.5.11a: x.52.1a; *pā'rūya*

* In this verse is to be noted a strange inconsistency, as regards the vocative accent, between the *pidas* here quoted and the first, which reads *dyaūsh pītah pr'thivī māt'ar ādhruḡ*.

hotar, i.26.5a; *sákhe vaso*, i.30.10c: iii.51.6d: viii.71.9c; *sákhe vajrin*, i.30.11c, 12b; *gáciva indra purukrd dyumattama*, i.53.3a; (*ródasē d' vadatā ganaçriyo*) *nr'shācah çārāh*, i.64.9b; (*āthā te aṅgīrastamā*) *'gne vedhastama priyām*, i.75.2b; *rājan soma*, i.91.4d; *sōma rājan*, viii.48.7c, 8a; *ūshah sūnrte*, i.123.5b; *ūsho devī*, i.123.3b; 124.12d: iii.61.2a: vi.64.2d, 6d: vii.77.5b; *ūsho maghoni*, iv.55.9a: v.79.6b, 7b; *ūshah sujāte*, vii.76.8d; 77.6b; *āgne bhrātar*, i.161.1d: vi.51.5b; *āgne pāvaka*, v.26.1a; *yāvishtha dāta* . . . *yājishtha hotah*, ii.6.6b, c; *hiranyaciṣṣā maruto*, ii.34.3c; *dēva tvashtāh*, iii.4.9b; *dēva hotah*, iii.7.9c; *dēvir dvārāh*, v.5.5a; *dēva ratha*, vi.47.28d; *hōtaç cikitvah*, iii.29.16b: v.2.7d; *indra svadhāvah*, iii.41.8c; *indra dēva*, iii.43.3b: *vishno dēva*, vii.99.1d; *indra marutvah*, iii.51.7a; *indra bhrātar*, iii.53.5b; *āksha vīṣo vīlita*, iii.53.19c; *r'tāvarī rodusī*, iii.54.4b; *bhāga trātah*, iii.56.8d; *āniḥpastā r̥bhavah*, iv.34.11b; *tūriyā 'ditya*, viii.52.7c; *āprāmisatya maghavan*, viii.61.4a; *vṛ'shann indo*, ix.40.6c; *pāva-māna vṛshabha*, ix.86.38b; *āgnishvāttāh pitarah*, x.15.11a; *pāṇca jandh*, x.53.4d; [*sū'no hinvasya harivah*, viii.40.9c;] *hōtar yavishtha sukrato*, iv.4.11d; *dēvīh shal urvir*, x.128.5a; *dēvir dvāro bhrātṛ viçvaminvāh*, x.110.5c; *ātūrtadākshā vṛshand vṛshan-vasā*, viii.26.1c; *mānojavasā vṛshand madacyutā*, viii.22.16a; *indra çavishtha satpate*, viii.13.12a (cf. viii.68.1d); *āçvīnd vājini-vasā*, v.78.3a; *indrāgnī ukthavāhasā*, vi.59.10a; *indrāvaruṇa sutapau*, vi.68.10a; *sīndhupati kshatriyā*, vii.64.2b; *indrāgnī vṛtrahand*, vii.93.1b; *indrāgnī vṛtrahand suvajrā*, vii.93.4c; *rūdrā r̥bhukshānah*, viii.7.12b; *d'dityāsah sumahasah*, viii.18.18c; *r'she vaiyaçva*, viii.23.24c; *vṛ'shann r̥jipin*, viii.33.12b; *indra çavishtha*, viii.46.19b; *indo samudramiṇkhaya*, ix.35.2a; *d'po revatīh*, x.30.8d, 12a; *mānyo vajrin*, x.83.6c. In the following passages, one of the vocatives is connected with a genitive: *āgne sūno sahasah*, vi.13.5b; *indra vājānām pate*, vi.45.10b; *indrā-nishnū madapati madānām*, vi.69.3a; *sūhasah sūnav āhuta*, viii.19.25c; *indra sthātṛ harīnām*, viii.24.17a; *mānor devā yājñi-yāsah*, viii.30.2c; *d'rjo napāt sahasāvan*, x.115.8a.

The Atharva-Veda presents under this head the following examples in which only the first vocative has the accent: *dāivir manushyeshavo*, i.19.2c; *viçve devāsah*, ii.12.5b; *āgne vaiçvānara*, ii.16.4a; *prāvṛddhe devī subhage urāci*, iv.26.2b; *āgne prtand-shāt*, v.14.8a; *dēva tvashtāh*, v.27.10b: vi.3.3d; *āgne yavishtha*, v.29.4d; *dēva saṁsphāna*, vi.79.3a; *viçve devā maruto viçva-vedusah*, vi.93.3b; *viçve devāh*, vi.115.1d; *mādhvī dhartārā vidathasya sutputi*, vii.73.4c; *dēvā gātuvidah*, vii.97.7b; *sōma rājan*, xi.1.26a; *bhū'me mātah*, xii.1.63d. In *āpām napāt sindh-avah*, vi.3.1c, and *sōmasyā 'ñço yudhām pate*, vii.81.3a, we have examples of the vocative modified by a genitive.

In the following passages, when a noun is immediately preceded or followed by one or more adjectives or appositives, all are accented: *āçvīnd pūruḍaṁsasā (nārā . . .)*, RV. i.3.2a; *dēvāsah pā'sharātayah*, i.23.8b: ii.41.15b; *pā'shan vishnav ēvayāvah*, i.90.5b; (. . . *sudānavah*) *māruto āhībhdnavah*, i.172.1c; *dhṛ'ta-*

vratā d'dityā ishīrāh, ii.29.1a; *sinivālī pr'thushtuke*, ii.32.6a; (*āmbitame nādītame*) *dēvitame sārāsvatī*, ii.41.16b; *dyāvūsh pītāh pr'thivī mā'tāh*, vi.51.5a; *br'āhmanāsah pītarah sōmyāsah*, vi.75.10a; *śāravye brāhmasam̐cite*, vi.75.16b; *bhāga prānetar bhāga sātīyārādhaḥ*, vii.41.3a; (*vah svatuvasaḥ*) *kāvayaḥ sū'ryatvacah*, vii.59.11b; *hōtar vārenyakrato (agne)*, viii.43.12b; *indra śāvishtha sātīpate*, viii.68.1d (cf. *indra śāvishtha sātīpate*, viii.13.12a, already cited); (*d'dityā rūdrā*) *vāsavaḥ sūdānavah*, x.66.12c; *vr'shākapyāi rēvati (sūputra d'd u sūsnushe)*, x.86.13a; *nārā dānsishthau*, x.143.3a; *ārāyī kā'ne vikāte*, x.155.1a; *rūdrā hīranyavartanī*, v.75.3c; *indrajyeshthā mārūdgand*, i.23.8a; ii.41.15a. In *vāsudhītī āvitārā janānām*, i.181.1d, one of the vocatives is limited by a genitive. In the Atharvan we find three examples belonging to this class: (*pravato napān*) *mārutah sū'ryatvacasah*, i.26.3b; *rūdra jālāshabhesaja nī'laśikhanda karmakṛt*, ii.27.6a,b; *tākman vyā'la vī gada (vyāṅga bhā'ri yāvaya)*, v.22.6a.

When the vocatives are separate, coördinate epithets of the same subject, the case is more doubtful, and the precise limits of the class also, as distinguished from the preceding one, are by no means easy to draw; there may be, as between epithets which seem to be sensibly coördinate, a subjective subordination or interdependence which would assimilate them to either of the foregoing classes. In about two-thirds (35) of the passages in the Rig-Veda estimated as probably belonging to this class, the apprehension of independent value prevails. In the Atharvan, all the 16 examples of the class are accented as independent. The examples of coördinate epithets of the same subject where each is alike accented are the following: (*ācvinā . . .*) *drāvat-pānī śubhas patī (pūrubhujā)*, i.3.1b; *br'hadbhāno yāvishthya*, i.36.15d; *jā'tavedo vicarshane*, i.78.1b; vi.16.29b, 36b; viii.43.2b; *śjishtha trā'tar āvitah*, i.129.10d; (*agne . . .*) *māndra svādāva r'tajāta sūkrato*, i.144.7b; (*sā . . .*) *vāsupate vāsudāvan*, ii.6.4b; (*varuṇa . . .*) *sāmraḷ r'tāvah*, ii.28.6b; *āmbitame nādītame (dēvitame sārāsvatī)*, ii.41.16b; (*agne . . .*) *sūccandra dāsma vīcāpate hāvyavāt*, v.8.5c; (*māruto . . .*) *tūvimaghāso amṛtā r'tajādhā: sātīyaśrutah kāvayo yāvāno (br'hadgirayah)*, v.57.8b,c; (*virāsah . . .*) *māryāso bhādrajānayah*, v.61.4b; *śūjāte ācva-sūnṛte*, v.79.1-10e; *sāhasramushka tūvinṛmna sātīpate*, vi.46.3c; (*agne . . .*) *vāsishtha śūkra dī'divah pā'vaka*, vii.1.8b; *śiprinī r'shivah śācivah*, viii.2.28c; (*śubhas patī*) *dāsrā hīranyavartanī*, viii.5.11b; cf. 8.1c; (*ācvinā*) *pūruccandrā nā'satyā*, viii.5.32c; *dhi'javanā nā'satyā*, viii.5.35c; *pā'cigo pā'cipājana*, viii.17.12a; *ācva-pate gōpata ūrvarāpate*, viii.21.3b; (*mahemate*) *sāhasrote śātāmagha*, viii.34.7b; *śātāmāte śātākṛato*, viii.46.3b; *sānitah sūsanitar ūgra cītra cētishtha sū'nṛta*, viii.46.20a,b; (*śātākṛato*) *prācāmanyō āhamsana*, viii.61.9d; *tūvigushma tūvikrato śācivo vīcva-yā mate*, viii.68.2a,b; *ā'rjo napād bhādraśoce*, viii.71.3b; *ā'rjo napād ācva-mishṭe*, ii.6.2b; (*agne . . .*) *māndra śūjāta sūkratō māra dāsmā 'tīthe*, viii.74.7c,d; (*subāho svaṅgure*)

pr'thushṭo pr'thujāghane, x.86.8b; *uttānaparne sūbhage dēvajāte sāhasvati*, x.145.2a,b; (*maghavan . . .*) *dhāt'ar vidhātah*, x.167.3d. In *dāsrā hīraṇyavartunī śubhas patī*, viii.87.5c, we have an irregular combination of two accented vocatives with an unaccented one, the latter being limited by a genitive. Cf. viii.5.11b, 8.1c, already cited.

The Atharvan furnishes the following examples of cōordinate epithets, all of which are accented: *jā'tavedas tīnāvacin*: (*āgne*), i.7.2b; (*oshudhe*) *rā'me kr'shne āsiknī ca*, i.23.1b; *īndraput্রে সোমপুত্রে*, iii.10.13a; *hīraṇyavarne sūbhage sū'ryavarne vīpush-tame*, v.5.6a,b; *hīraṇyavarne sūbhage śūshme lōmaçavakshane*, v.5.7a,b; *jā'tavedas tīnāvacin*, v.8.2f; *r'tujāta r'tāvāri*, v.15.1-11c; *tākman vyā'la vīgadu* (*pada-text, vi gado*), v.22.8a; *sindhupatnīh sindhurājñih*, vi.24.3a; *br'hatpālāçe sūbhage vārshavrd-dha r'tāvāri*, vi.30.3a,b; *tārdāpate vāghāpate*, vi.50.3a; *dēvapatnī āpsurasā vādhitam*, vi.118.3d; *vījāvati prījāvati*, ix.3.13c, 14c; *bhāt'apātī pāçupātī*, xi.2.1b; *sōmapāh sōmapāyinaḥ*, xviii.3.64c.

In the following passages of the Rig-Veda, where several cōordinate epithets of the same subject occur in succession, only the first is accented: *ōmāsaç carshanīdhrtah*, i.3.7a; *ghr'tāhavana dīdivah*, i.12.5a; (*agne . . .*) *hōtah pāvaka*, i.13.1c; (*āçvinā . . .*) *dīdyagnī çucivratā*, i.15.11b; *ghr'tāhavana santya*, i.45.5a; (*vām . . .*) *nā'satyā matavacasā*, i.46.5b; *çāvishtha vajrin*, i.80.1c; (*indra . . .*) *çāvishtha dhr'shno*, i.84.1b; (*ūsho adyē'hā gomaty*) *āçvāvati vibhāvāri*, i.92.14b; (*jātavedo*) *dēva svadhāvo*, iii.20.3b; *bhāga trātar dhishane*, iii.56.6d; (*dudhra khidvāḥ*) *pūruhāta purāvaso 'suraghnāḥ*, vi.22.4d; *ādhvāryo vīra*, vi.44.13a; *nārā nrtā*, vi.63.5d; *vaiçvānara jātavedo*, vii.13.2d; *r'bhu-kshano vājāḥ*, vii.48.1a; *ājipate nrpate*, viii.54.6a; *ūrjo napāj jātavedah*, x.140.3a.

Altogether, of successive vocatives where the first is initial and accented and the rest are unaccented, the Rig-Veda has 237 cases in 114 *pādas*, and the Atharvan has 48 cases in 18 *pādas*. Where the first is initial and all are accented, the Rik has 206 cases in 86 *pādas*, and the Atharvan has 101 cases in 46 *pādas*. Where all are interior and unaccented, the Rik has 705 cases in 338 *pādas*; the Atharvan in 46 *pādas* has, according to different readings, from 92 to 94 vocatives; the printed text gives 94.

A genitive case dependent on a vocative (never separated from it by intervening words) forms as it were a single word or phrase with it, and shares its accent. Thus, for example, "O son of strength," is *sū'no sahasah* or *sāhasah sūno* if initial, and *sāno sahasah* or *sahasah sūno* if interior. There are 178 such examples in the Rig-Veda, in 131 of which the genitive precedes; and 40 in the Atharvan, the genitive preceding in all but one.

The passages containing examples of the vocative modified by a genitive are the following:

Like *sū'no sahasah*: RV. i.181.1d (*vāsudhītī āvitārā janānām*, already quoted): viii.40.9c (*sū'no hinvásyā harivāḥ*, see below): x.24.2c: 33.7b.

Like *sūno sahasaḥ*: i.48.1b,9b; 49.2d; 58.8a; 114.9b: ii.28.3c; 33.1a: iii.1.8a; 14.6a; 25.5b: iv.2.2a; 34.6a; 37.4c: v.79.2b,3b, 8b,9a: vi.1.10c: 4.1b; 5.5b; 11.6c; 13.4a,5b,6a; 15.3c,19a; 18.11c; 20.1d; 21.11b; 50.9a; 69.3a: vii.1.21b,22d; 3.8c; 7.7b; 8.7b; 16.4c; 81.3a: viii.19.7b (two examples); 24.17a; 33.12d; 40.9b; 46.1c; 92.14a: x.50.6b; 127.8b. AV. xix.47.5d.

Like *sāhasaḥ sūno*: i.3.1b; 44.5b (*viśvasyā 'mrta bhojana*); 58.8d; 117.12b; 130.10b: ii.6.2b; 23.19a; 24.15a,16a: iii.24.3b; 38.5c: iv.37.4c (*indrasya sūno pavaso napātah*); 44.2b; 57.2a: v.4.8b; 17.5c; 63.1a: vii.54.1,2,3a: viii.8.5c (*svā'hā stōmasya vardhand*); 17.14a; 19.25c; 26.21b; 30.2c; 84.4b: ix.31.6b; 82.4b; 108.9b: x.11.7b; 20.10b; 30.4c; 93.3a; 115.8a; 140.3a; 142.1b; 149.2b; 166.3c.

AV. i.1.2c; 13.3a: v.6.9 (*cākahusho hete mānaso hete brāhmaṇo hete tāpasascha hete*): vi.3.1c,3c: vii.97.8a: viii.1.17a,18a (unaccented in MSS.), 19a: xiv.1.31c.

Like *sahasah sūno*: i.11.2b; 18.1b,3c,5a; 26.1b,10c; 29.2a; 30.5a,22b; 34.6d; 40.1a,2a; 42.1b; 74.5b; 79.4b: 131.4e; 141.10c; 161.14d: ii.1.3c; 23.1c,5d,9a,11c; 36.2d: iii.14.4c,6a; 16.5c; 18.4a; 28.5b; 51.10b: iv.6.1a; 11.6c; 32.22b; 35.1a,8c; 47.3b; 51.10a,11a: v.3.1c,6d,9b; 4.6c; 6.5b (*śūkrasya śocishas pate*), 9d; 35.5d; 54.10b; 62.9b; 75.8b: vi.15.14a; 16.18b,25c,30c; 45.10b (*indra vājānām pate*); 53.1a; 55.1a; 64.4d,5c; 65.6a: vii.14.2c; 55.1a; 64.2a; 77.6a; 81.5c; 97.9a: viii.5.11a; 6.21a; 8.16d; 17.13a; 19.7b; 22.4c,6c; 23.12a; 47.14b,15b; 60.2a; 84.5b; 90.5b; 92.30b; 97.6b: ix.36.6c; 83.1a; 104.5a; 105.5a: x.40.4d, 12c,13c; 85.15a; 131.4c; 155.2c; 164.1a,4a; 174.1c.

AV. i.1.2a; 13.2a; 25.2c,3c; 26.3a: ii.14.2c: iv.4.6c; 16.9b (*asāv amushyāyana 'mushyāḥ putra*): vi.6.1a; 69.2b; 79.2a; 101.2c; 140.1c: vii.56.4c; 73.4c (*mā'dhvi dhartārā vidathasya satpatī*); 81.3a: viii.6.15d: ix.1.19b: x.5.45a,c; xix.8.6a; 24.1c; 63.1a.

Yet in a very few cases the genitive (probably by an error of tradition) maintains its own independent accent. The following have been noted: *vr̥shabha kshitiṇā'm*, i.177.3c: vi.32.4c (in both which Grassmann would omit the accent); *yāyām ṛtāsya rath-yah*, vii.68.12d: viii.83.3c; *sū'no hinvasya harivah*, viii.40.9c.

Very rarely, another case than the genitive is found as adjunct of a vocative, and there are one or two instances of its recognition as such by loss of accent. Thus in viii.56.1a we read *prāti te dasyave vr̥ka*, with which compare *dasyave vr̥'kah*, viii.56.2b: and the VS. reads *agne ghṛtenā 'huta* at xvii.50, while the Atharvan in the corresponding passage (vi.5.1) has *ghṛtēna*. In *úsho vā'jena vājini prācetāḥ (stōmaṁ jushasva)*, iii.61.1a, and (*túviśushma túvikrato*) *pácivo vícvayā mate*, viii.68.2b, it is impossible to tell whether the instrumentals are or are not treated as adjuncts of the vocatives. In *indrāvisṇvā havishā vāvṛdhānā'grādvānā námasā rātahavyā*, vi.69.6b, the change of *havishā* to *hāvishā* would (in *samhitā*) alone be required in order to convert the first half-verse into a series of vocatives (compare *námasā rātahavyāḥ* at v.43.14: vi.11.4); but the verse can be fairly translated as it stands.

The very peculiar construction is sometimes made of joining a nominative to a vocative and adding a verb in the dual; for example, *índraç ca sómam pibatam brhaspate*, iv.50.10a, 'along with Indra, do ye two drink the soma, O Brhaspati!' The passages in which similar forms occur are the following:

Like *índraç ca soma*: i.93.5b; 164.19c (*índraç ca yá' cakrá-
tuh soma tá'ni*): iv.28.5b; 47.2a; 50.10a: v.51.6a; 60.7a: vi.
68.4d; 69.8c: vii.104.25b: viii.1.6c: ix.19.2b; 95.5c (*índraç ca
yát ksháyathah saúbhagáya*, with pronoun understood): 111.3f
(*vájraç ca yád bhávatho ánapacyutá*, with pronoun understood).

Like *sóma índraç ca*: i.2.5a,8a; 135.7a,c,f (*áti váyo sasatá yáhi
çáçvato, yátra grá'vá vádati tátra gachatam: grhám índraç ca
gachatam: . . . á' pūrnáyá nīyūtá yátho adhvarám: índraç ca
yátho adhvarám*): iii.25.4a: iv.47.3a; 49.3a,b (*á' na indrábrhas-
pati grhám índraç ca gachatam*): v.64.5a,b (*á' no mitra sudī-
bhir várunaç ca sadhástha á'*); 67.5a,b (*kó ní vām mitrá' 'stuto
váruno vá taná'nám*, with *vá* instead of *ca*): vii.66.17b,c (*yátam
varuna dyumát: mitráç ca sómapítaye*); 97.10a and 98.7a
(*br'haspate yuvám índraç ca vásvo*).

With this construction may be compared such more isolated cases as *á' yád ruhá'va várunaç ca ná'vam* (vii.88.3a), where the pronoun *ahám* which in idea goes with *várunah* to make the subject of *ruhá'va* is also omitted; and *mátá' ca me chadayathah samá' vaso* (viii.1.6c).

An example, omitted above (p. 59, below), of successive interior vocatives with accent is *váyám te vo váruna mí'trá' 'ryaman*, viii.19.35c.

ARTICLE III.

ON THE RELATION IN THE RIG-VEDA BETWEEN THE PALATAL AND LABIAL VOWELS (*i, î, u, û*) AND THEIR CORRESPONDING SEMIVOWELS (*y, v*).

BY A. HJALMAR EDGREN,
INSTRUCTOR IN MODERN LANGUAGES IN YALE COLLEGE (SHEFFIELD SCIENTIFIC SCHOOL).

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THERE is between the old Vedic dialect and the classical Sanskrit an important discrepancy as regards the treatment and occurrence before dissimilar vowels of *i, u* or *y, v*, which serves to throw some light on the history and original value of these letters. In classical Sanskrit the vowels in question (*i, î, u, û*) are never found or tolerated before a dissimilar vowel or diphthong, but only (by conversion or otherwise) their corresponding semivowels. But for the Vedic language, on the contrary, we possess metrical evidence that this euphonic combination, though graphically observed in the texts of the ancient hymns, was only partly so in reading. Semivowels artificially written, according to the usage of the later language, must often be restored, in nearly all their varied combinations, to vowels; and sometimes the very same words exhibit in different or even in the same hymns and verses a different treatment in this respect.

It might appear at first as if arbitrary usage, careless metrical construction, and corruption of the texts, had each contributed their share to this variety. That they have done so to some limited extent cannot very well be questioned; but a careful examination of the whole field shows that the diversity is in the main of organic nature, a result of actual growth rather than of lawlessness and neglect.

It is generally conceded that the Indo-European language did not at first possess the semivowels *y* and *v*, though it had the vowels *i* and *u*. The former are consequently later developments of the latter, according to the principle of a general phonetic change from the extremities of the alphabetic scheme towards its middle. We might accordingly expect to find in the older monuments of the language a transition-state quite different from that in which the classical speech was finally stereotyped. But everything in that transitional state being in flux, on an onward move, we cannot expect to see whole categories of forms or words by an equal and regular progress pass mechanically from one state into another. On the contrary, partial changes and frequent exceptions—counter-currents and eddies, so to speak, in the stream—are to be expected; and this all the more on account of the nature of the change. The vowels and semivowels in question differ so infinitesimally in articulation that they are most readily interchanged; and this fact not merely facilitated the mutation, but likewise favored, in a high degree, an occasional retention and even restoration of the more primitive vowel-sound, in the very same forms in which the later consonant-sound was mostly admitted; and *vice versa*. No doubt arbitrary choice on the part of the individual poet had on this very account a freer scope; but if we can only find that these discrepancies of identical words are of exceptional occurrence, and that, for the rest, general principles, unconsciously obeyed by the individual, underlie the main facts, such anomalous exceptions lose their significance.

The following statistical statements will show not only that the cases in which the same forms are differently treated, though nowise rare, are few in comparison with the cases of uniform treatment; but also that certain principles determine the whole vast residue of facts. And, indeed, these principles are to a large extent such as we might *a priori* expect them to be. It would seem natural that the vowels should most tenaciously preserve their identity when occurring not within a word, but at the end of one word and before another beginning with a vowel, or at the end of a stem before a vowel-suffix, since a change of the final here impairs the individuality of the word, and blends it with the following element. And, on the other hand, that they should be more readily consonantized in all combinations the original independence and significance of which were dimmed and forgotten (as in derivative, and especially in inflectional suffixes, and in radical elements), and, for euphonic reasons, wherever the vowel was placed between two other vowels, and thus occasioned a double hiatus.

Such general inferences are borne out by actual facts as found in the Rig-Veda. It should be stated, to begin with,

that the vowels *i* and *u* never, under any circumstances, occur between two other vowels in a word; this case is therefore not further to be considered at all, and is eliminated from all the following statistical statements. For the rest (*i. e.* when preceded by a consonant and followed by a dissimilar vowel), they are retained as *i* and *u* almost without exception in the collocation of words in sentences, there being only traces of an inchoate mutation in a few such dependent words as prepositions, etc. (and it may well be doubted whether the spoken language in this respect ever followed strictly the requirements of the written). The vowels maintain themselves likewise between the members of a compound, although here the tendency of less independent words to lose their identity and blend with others is slightly more apparent.

In combinations with a suffixal vowel, final *i* (*î*) and *u* (*û*) maintain themselves in nearly twice as many words as they are altered (especially in nouns, less so in the few verbs that come here under consideration); and in numerous instances they (especially *i*, *î*) take on an additional semi-vowel of their own kind (are "split"), which bridges over the hiatus. Moreover, it is found that the mutation was favored by a preceding short syllable, while a long syllable exercised, as a rule, a conservative influence.

Among derivative and inflectional suffixes, those forming declinable stems, on the one hand, are very differently treated from those forming conjugable stems and from inflectional endings, on the other. In the former, the vowel *i* is prevailingly retained, while the vowel *u* is with few exceptions changed throughout to *v*. But this discrepancy in the treatment of *i* and *u* in formative suffixes is not without assignable causes. Thus the vowel *i*, as a rule, is preserved by the influence of a preceding long syllable, and by being accented; but now it so happens that these two preservative forces, while they are frequently present in words with a suffix containing an *i* (*y*), are almost entirely lacking in words with a suffix containing a *v* (*u*). In suffixes forming conjugation-stems; and also in inflectional endings (especially in those of verbs), the semivowels are found in an overwhelming majority. But even here the occurrence of some terminations containing the vowel would seem to indicate its earlier occurrence, and indications of the preserving influence of a preceding long syllable are also not lacking.

Finally, as regards the nucleus of words, the elementary part of them which remains when they are divested of their formative elements, the semivowels are found everywhere save in a few entirely sporadic cases, which may indeed point to an early formative process not entirely forgotten in the remote Vedic period.

Mainly in accordance with the principles thus laid down, the relation of the palatal and labial vowels and their corresponding semivowels will be considered, in what follows, under three heads, with their subdivisions, viz :

- A. Treatment of final *i*, *ī*, *u*, *ū*, before dissimilar vowels :
 - I. In independent words ;
 - II. In compounds ;
 - III. In noun-stems and verb-roots.
- B. Occurrence of *i* or *y*, *u* or *v*, in formative elements :
 - I. In derivative suffixes ;
 - II. In declensional endings ;
 - III. In verb-inflection.
- C. Occurrence of *i* or *y*, *u* or *v* in the root-element (real or apparent) of the word.

The collection of the material is based, in the main, on Grassmann's *Wörterbuch zum Rig-Veda*. For the statistics of noun inflection I am indebted to Professor Lanman's article on "Noun-Inflection in the Rig-Veda" (*Journ. of Am. Or. Soc.*, vol. x.).

A. TREATMENT OF FINAL *i*, *ī*, *u*, *ū* BEFORE DISSIMILAR VOWELS.

I. IN INDEPENDENT WORDS.

An examination of a few hymns is enough to bring to light the fact that the absence of external *sandhi* (except graphically) is so regular that the exceedingly few exceptions which may be found must be considered as wholly sporadic—or, at the utmost, as revealing a dawning tendency to avoid the hiatus by weakening the final vowels of such subordinate words as prepositions or other particles into semivowels. In order to reach a valid conclusion in regard to the treatment of final *i*, *ī*, *u*, *ū* in the text, 1294 verses (150 hymns), chosen from all the *Maṇḍalas* (but especially from the 1st and 10th), were examined ; and the result will show the needlessness of searching through the whole Rig-Vedic material.

In these 1294 verses the occurrence was as follows : before a dissimilar vowel, final *i* (*ī*) 285 times, and final *y* 1 time ; final *u* (*ū*) 106 times, and final *v* 4 times.

The exceptional occurrence of *y* was in *prāty* (i.11.6) ; and those of *v* were in *ānv* 3 times (i.23.23 ; iv.4.11 ; x.13.3), and *tv* once (Vāl.3.4). A special examination of sundry other passages in which particles in *-i* and *-u* occur before vowels showed that they were generally unchanged ; only for *anu* a couple of additional forms *anv* were found. It may be worthy of notice that in compounds also, where *sandhi* is as a rule omitted, the prepositions in part submit to its law.

II. IN COMPOUNDS.

The treatment of final *i*, *î*, *u*, *û* of the prior member of a compound before a dissimilar vowel is in the main accordant with that of the same vowels in independent words. Below are given all the instances of such combinations that occur in the Rig-Veda:

1. *i* before a dissimilar vowel: *akudhri-ac* (?) 1, *ati-d'ya* 1 (*aty-* 5), *ânti-ûti* 1, *abhi-* (in *abhi-ânjana* 3, *abhi-ardhayâjvan* 1; *abhy-* 4), *asmadhri-ac* (?) 9, *urvi'-ûti* 1, *kadri-ac* (?) 1, *kṛṣhti-ojas* 1, *tvi'-ôjas* 1, *tâ'rni-artha* 2, *tri-* (in *tri-anîkâ* 1, *tri'-ambaka* 1, *tri'-aruṇa* 2, *tri'-arusha* 1, *tri-âvi* 1, *tri'-âçir* 1, *tri-uddya* 1, *tri-udhân* 1), *dadhi-* (in *dadhi-ûc* 7, *dadhi-âçir* 7; *dadhy-* 2), *ni'* (in *ni'-ac* 25, *ni-iñcana* 1, *ni-âyana* 2, *ni-arthâ* 4, *ni'-okas* 2, *ni-ôcanî* 1), *bhûri-* (*bhûri-akshâ* 1, *bhû'-ri-âsuti* 1, *bhû'-ri-ojas* 1), *madri-ac* 3, *vadhri-açvâ* 5 (*vâ'dhri-açva* 2), *vishvadhri-ac* (?) 1, *vi-* (in *vi-adhvan* 1, *vi-âyana* 1, *vi'-alkaçd* (?) 1, *vi'-açva* 5, *vi-açvavât* 4, *vi-ânaçî* 3, *vi-ûsh* 4, *vi'-ushtî* 29, *vi'-enas* 1, *vi'-enî* 1, *vi-ôdana* 1, *vi'-oman* 23, also in *vioma-sâd* 1), *hâri-açva* 24 (also in *hâriçvaprasûta* 1).

2. *y* before a vowel: *âty-* (in *âty-avi* 4, *âty-ûrmi* 1; *ati-* 1), *âdhy-aksha* 4, *abhy-* (in *abhy-âyañsénya* 1, *abhy-d'ram* 1, *abhy-âvarti'n* 2; *abhi-* 1), *âhy-ârshu* 1, *gûvy-ûti* (? see below) 12 (*agavy-ûti* 1), *dadhy-ûc* 2 (*dadhi-* 14), (*çvit-y-ûc* ? 4).

3. *u* before a dissimilar vowel: *âçu-* (in *âçu-âpas* 1, *âçu-açva* 2, *âçu-açvâ* 3), *uru-îjra* 1, *rju-âc* 1, *dâçu-adhvara* 5, *dhr̥shnû-ojas* 2, *puru-anîka* 5, *pârû-dyûs* (?) 1, *bandhu-e-hâ* 1, *bâhu-rjas* 4, *madhu-* (in *madhu-âd* 1, *mâdhu-arṇas* 1), *vîdû-aiga* 3, *su-* (in *su-agni* 6, *su-ânga* 2, *su-aṅguri* 3, *su-âc* 6, *su-iñcas* 1, *su-adhvarâ* 33, *su-anîka* 5, *su-apatyâ* 16, *su-âpas* 16, from it *su-apasy-* 2, and *su-apasyd'* 7, *su-apâka* 1, *su-apivâta* 1, *su-âpnas* 2, *su-abhishtî* 5, *su-abhishtîsumna* 1, *su-abhiçû* 2, *sû-arahkṛta* 1, *su-arkâ* 3, *su-arci'* 1, *su-arthâ* 2, *su-âvas* 15, *su-âçva* 17, *su-açrayâ* 1, *su-âçvâ* 11, *su-âstra* 1, *svastî* 103, *su-astigâ'* 1, *su-astidd'* 3, *su-astimât* 3, *su-astivâ'h* 1, *sû-âtata* 2, *su-âpi'* 3, *su-âbhû'* 7, *su-âyasâ* 1, *su-âyîj* 1, *su-âyudhâ* 14, *su-d'vasu* 1, *su-d'vrj* 1, *su-dveçâ* 3, *sû-âçvâ* 1, *su-âçvâ* 1, *su-â's* 2, *su-âstathâ* 1, *sû-âhuta* 8, *su-idhmâ* 1, *su-ishâ* 1, *sû-ishâ* 1, *su-ôjas* 3; *sv-* only in *svastî* 4).

4. *v* before a vowel: *anv-artit'* (for *anuvartit'*) 1, *ṛtv-îj* 17, *pulv-aghâ* 1, *sv-astî* 4 (*su-* 328).

As will be seen from the preceding enumerations, the vowels *i* and *u* are as a rule retained unchanged in composition, final *i* before vowels occurring 194 times (in 17 different compounds), but final *y* only 29 times (in 6 different compounds); and final *u* before vowels occurring 359 times (in 12 different compounds), but final *v* only 23 times (in 4 different compounds). It is especially the prepositions *ati* and *abhi* which show a tendency to submit to the later euphonic requirements; and it seems natural that such subordinate words should first lose their independence. The only other noteworthy exceptions are *gûvy-ûti* and *ṛtv-îj*. As for *gûvy-ûti*, it is the only form found, and occurs not less than 12 times; but the character of *y* is here uncertain; it seems hardly to be a final of the prior member of the compound. Pāṇini divides the compound as *go-yâti*, Böhlingk-Roth and Grassmann rather as *go-ûti* (with an inserted *y*, Gr.). And *ṛtv-îj*, also the only form found, and occurring 17 times, offers a striking exception to the general rule (if, indeed, the accepted derivation is the true one, as seems hardly to be questioned).

III. IN NOUN-STEMS AND VERB-ROOTS.

The treatment of final *i*, *î*, *u*, *û* of noun-stems and of verb-roots before an added inflectional ending beginning with a vowel is

somewhat different. In noun-stems these vowels are prevailingly retained, but in verb-roots they are mostly consonantized (in verb-roots in *-u*, *-ā*, indeed, always so). It should be remarked, however, that in both cases, and especially in verb-roots, the hiatus is very frequently avoided by the insertion of a semivowel between the stem or root and the ending, and in verb-roots by strengthening the vowel and converting the diphthong as usual. Below will be given a statistical résumé of the relative occurrence of vowel or semivowel before inflectional endings (for a full exposition of the treatment of nouns, see Professor Lanman's article referred to above, p. 70).

1. Noun-stems.

a. Final *t* or *y*: in *-am* 40 times (fr. 27 *t*-stems), *-am* 1 (*i*-stem); *-d* 108 times (instr. sing.: fr. 22 *i*-stems 43 times, and 35 *t*-stems 58 times; nom., acc., voc., dual: fr. 5 *t*-stems 7 times), *-d* 46 times (instr. sing.: fr. 11 *t*-stems 13 times; dual, 6 *t*-stems 33 times); *-e* 16 times (fr. 13 *t*-stems), *-e* 18 times (fr. 2 *i*-stems); *-ai* 4 times (fr. 4 *t*-stems); *-ai* 27 times (fr. 17 *t*-stems); *-ds* 32 times (abl. sing.: fr. 1 *i*-stem once, and 2 *t*-stems 4 times; genit. sing.: fr. 2 *i*-stems 3 times, 16 *t*-stems 24 times), *-ds* 23 times (abl.: from 2 *i*-stems twice, and 4 *t*-stems 21 times), *-us* 1 (*sākhūs*), *-us* 10 times (abl. once, and genit. 9 times, fr. 3 *i*-stems); *-as* 118 times (genit. sing.: fr. 1 *i*-stem 3 times, and 7 *t*-stems 9 times; nom., voc. pl.: fr. 23 stems 72 times; acc. pl.: fr. 18 stems 34 times), *-as* 86 times (genit. sing.: fr. 2 *i*-stems 52 times, and 3 *t*-stems 3 times; nom., voc. pl.: fr. 1 *i*-stem 20 times; acc. pl.: fr. 1 *i*-stem 11 times); *-dm* 17 times (fr. 2 *i*-stems 3 times, and 8 *t*-stems 14 times), *-dm* 16 times (fr. 3 *i*-stems 3 times, and 7 *t*-stems 13 times); *-au* 2 times (*pūtyau*); *-os* 56 times (fr. 5 *i*-stems 30 times, and 10 *t*-stems 26 times), *-os* 11 times (fr. 1 *i*-stem once, and 5 *t*-stems 9 times).

The preceding summary shows that the vowel *i* or *ī* is retained in 392 instances (308 of these from *i*-stems, and 84 from *t*-stems), and that it is altered to *y* in 240 instances (107 of these from *t*-stems and 133 from *i*-stems). To these should be added 30 infinitives in *-dhyai* (55 occurrences), 5 in *-dhiai* (17 occurrences), and one in *-ityai*, these being virtually noun-datives. The prevalence of vowel retention is decided; and if different stems alone are considered, the disproportion is still greater, *i* then occurring about twice as often as *y*. It was to be expected that the vowel-character of the finals should be prevailingly protected here by that feeling of the integrity of the word which the unaltered final in other cases than those considered kept alive. As auxiliary to it, however, are to be noticed the quantity of the final and (as in the case of the suffix *-ia*) the accent, and the quantity of the preceding syllable.

That the final *ī* maintained itself more tenaciously than the final *i* is seen from the preceding statement. In regard to the accent, it is to be noticed that in the comparatively few instances where the final of the theme is accented before the terminational vowel (as in *mandūkīā*, *sphigīā*, *srñīā*, *manyunīās*, *ahīās*, *meshīe*, *vrkīe*, etc.) the vowel *ī* is preserved as a rule. Generally oxytone stems shift their accent to the termination (as in *pītiā'* fr. *pīti*, *prthivīā'* fr. *prthivī*, *devīā'* fr. *devī*, *samānīā'* fr. *samānī*, *apītyā'* fr. *apīti*, *matyā'* fr. *matī*, *vasatyā'* fr. *vasatī*, etc.) and then the vowel, though prevailingly retained, is not seldom changed

into *y*. As regards the influence exercised by the quantity of the preceding syllable, it will be seen from the following quotation of all the instrumental cases (the others in the main agreeing) that *i* is mostly found after a long and *y* after a short syllable:

a. -*id* preceded by a long syllable: *āṇvīd* 3, *āvartīd* 1, *asiknīd* 1, *ābhāsīd* 1, *āsīd* 5, *ūrmīd* 1, *kīrtīd* 1, *kundṛnād* 1, *ghṛtād* 1, *citāntīd* 1, *citāyāntīd* 1, *jālpīd* 1, *dādīd* 1, *devād* 1, *devīd* 5, *dhṛājīd* 1, *pātnīd* 1, *pā'rōhīd* 1, *pīdīd* 1, *pūrandhīd* 9, *purānīd* 1, *bhā'mīd* 1, *maṇḍūkīd* 1, *rānīd* 5, *vāsvīd* 1, *viçvād* 1, *viçvīd* 1, *rīcīd* 1, *vṛshīd* 2, *veçīd* 1, *çarmayāntīd* 1, *satṛād* 1, *samānīd* 5, *sukṛtīd* 1, *sūcīd* 1, *sūrmīd* 1, *stōbhantīd* 1, *hārshīd* 2.

β. -*id* preceded by a short syllable: *ācvāvatīd* 1, *tvīshīd* 1, *tmānīd* 1, *dāvidyutātīd* 1, *nāmīd* 1, *nāvyaśīd* 1, *pātnīd* 1, *rājīd* 1, *rathīd* 2, *rōhīnīd* 1, *çācīd* 11, *çāmīd* 2, *çīmīd* 1, *sākīd* 4, *sumatīd* 1, *sushtutīd* 1, *srnīd* 2, *hārīnīd* 1.

γ. -*yd* preceded by a long syllable: *açtīyd* 1, *ā'kūtyā* 1, *iṣṭīyd* 1 (?), *devāhūtyā* 1 (but -*tīe*).

δ. -*yd* preceded by a short syllable: *açāmīyd* 1, *ācvāvatīyd* 1, *gātumatīyd* 1, *tmānyā* 1, *nāvyaśīd* 1, *pātyā* 3, *pavyā* 3, *prthīvyā* 3, *prāmatīyd* 1, *matīyd* 1, *mādhumatīyd* 1, *mahīyd* 1, *mīthātīyd* 1, *rayīyd* 1, *vasatīyd* 1, *vā'javatīyd* 1, *çācyā* 3, *sākīyd* 4, *sādhā-ranyā* 1, *sumatīyd* 3, *sushtutīyd* 1, *sōmavatīyd* 1, *hīraṇyāyd* (fr. *hīraṇyāyīyd*) 1.

The cases of *u* or *v* now follow:

b. Final *u* or *v*: in *u-am* 66 times (fr. 2 *u*-stems twice, and 12 *û*-stems 64 times); *u-d* 59 times (instr. sing.: fr. 7 *u*-stems 12 times, and 6 *û*-stems 40 times; nom., acc., voc. dual: fr. 2 stems 7 times); *v-d* 62 times (instr.: fr. 4 *u*-stems 61 times; dual: only *paçvād*); *u-e* 22 times (fr. 1 *u*-stem once, and 4 *û*-stems 21 times), *v-e* 16 times (fr. 4 *u*-stems), *v-ai* 1 (*iṣhvai*); *u-as* 89 times (abl. sing.: fr. 1 *û*-stem 3 times; genit. sing.: fr. 5 *u*-stems 6 times, and 3 *û*-stems 19 times; nom., voc. pl.: fr. 1 *u*-stem once, and 23 *û*-stems 60 times), *v-as* 160 times (abl.: fr. 2 *u*-stems 3 times; genit.: fr. 7 *u*-stems 142 times; pl.: fr. 7 *u*-stems 15 times); *u-ds* 2 times (fr. 2 *û*-stems), *v-ds* 1 (*u*-stem); *u-i* (f) 7 times (fr. 3 *û*-stems); *u-ām* 1 (*çvaçrud'm*); *u-os* 39 times (fr. 4 *u*-stems 24 times, and 1 *û*-stem 15 times), *v-os* 1 (*camvōs*).

As seen from the preceding statistical account, *u* before a suffixal vowel occurs 285 times (239 of these from *û*-stems, and 46 from *u*-stems), and *v* 241 times (all from *u*-stems). Compare also the gerundives in *-tua*, *-tva*. It must be noticed that the frequency of *v* is owing chiefly to the exceptional frequency of the forms *mādhvas* and *vāsvas*, which together occur not less than 110 times. If the stems alone be considered, *u* occurs (like *î*) about twice as often as its semivowel. The discrepancy between *u*- and *û*-stems is much more striking than between *i*- and *î*-stems, inasmuch as the *û*-stems never have their vowel converted into a semivowel. The influence of the accent is the same as in the *î*-stems; but any influence of the quantity of the syllable before the final is not noticeable.

2. Verb-roots.

In verb-roots ending in *i*, *î* or *u*, *û*, the combination of these vowels with a following vowel is generally made by strengthening the *i*, *î* to *e* (*ay*), as in *ci*, *cayate*, and of *u*, *û* to *o* (*av*), as in *stu*, *stavate*; or by insertion of *y*, *v* (the so-called "split"), as in *dī*, *dīyate*; *stu*, *stuvanti*. These processes take place, one or both, in all verbs (22) in *-i* and *-î*. Only in the following cases is the final retained or changed into *y*:

a. *i* retained: (i) *iantu* 1; (dī) *dī'diat* 7, *dī'diāna* 6; (dhī) *dī'dhiat* 1, *dī'dhidna* 13; (pī) *pīpīdnā* 3; (mā) *mēmīat* 1, (mī) *mēmīdnā* 1; (vī) *vīanti* 1, *vīānti* 1, *vīāntu* 3, *vīanti* 3, *vīvīe* 1, *vīāt* 5, *vīānū* 1; (sī) *sīa* 1, *sīasva* 1, *sīadhvam* 1, *sīāt* 1.

β. *i* changed to *y*: (i) *yānti* 20, *yanti* 73, *yan* 1, *yāntu* 1, *yantu* 26; (cī) *cīkyatus* 1, *cīkyūs* 4; (jī) *jīgyūs* 8; (pī) *pīpyntam* 4, *pīpyatām* 1, *pīpyata* 1, *pīpyathus* 1, *pīpyus* 1, *pīpye* 3, *āpīpyan* 1; (mī) *mīmyūs* 1; (bhī) *bībhyat* 2, *bībhyūs* 4; (vī) *āvyan* 1; (sī) *syati* 1, *syanti* 1, *sya* 4, *syatu* 2, *syatam* 2, *syatām* 1, *syasva* 1.

In regard to the verb-roots in *-u*, *-ā*, they all (30) connect with a following vowel either by strengthening the final, or by insertion of *v*, or, very rarely, by conversion of the vowel to its corresponding semivowel (as in *juhvatī*, *juhve*, *svdna*, etc.). The final *u*, *ā* is never found retained before a following vowel.

B. OCCURRENCE OF *i* OR *y*, AND *u* OR *v*, IN FORMATIVE ELEMENTS.

I. IN DERIVATIVE SUFFIXES.

Suffixes forming declinable stems, and containing either of the vowels or semivowels in question, are quite numerous; and they will be taken up below mainly in the order of their frequency. A complete statement of all simple nominal stems used alone or in composition (participles and gerundives included) is intended, and also, by the way, of compounds and derivatives from them.

The suffix *-ia* (*-ya*) is by far the most frequently used; and for reasons of convenience words with this suffix will be arranged according to their finals in two groups, one comprising those words in which the suffix is preceded by a long syllable, and the other those words in which it is preceded by a short syllable.

SUFFIX-FORM *-ia*.

a. Preceded by a long syllable: *upavākia* 1, *anūkia* 1, *okia* 8, *sākhia* 1, *āngia* 1, *gāhgia* 1, *apdciā* 1, *upavā'cia* 1, *sācia* 1, *apicia* 11, *d'jia* 4 (*-ya* 1; compound: *prsh-addyā* 1), *prtanā'jia* 1, *rājiā* 1 (compounds: *samaryad'jia* 1, *vi'rard'jia* 1, *sva-rā'jia* 8, *sā'mrdjia* 5), *bhojia* 3, *mūjia* 5, *yāvishia* 13, *prsthia* 3, *ē'dia* 33 (*-ya* 2), *drōpia* 1, *dācopia* 1, *sāvarnū* 1, *vr'shnia* 30 (derivative: *vr'shniāvat* 2), *sajātia* 8, *pratt'ia* 2, *dātia* 16, *adyātia* 1, *cvetiā* 2, *sahantia* 3, *aptiā* 1, *sāptia* 1, *ādhigartia* 1, *mārtia* 170 (compounds: *āmartia* 55, *upārimartia* 1; *mārtiaktia* 1, *markiatrd'* 5, *martiatvanā* 1, *mārtieshita* 1), *agāstia* 5 (*-ya* 1), *pastia* 2 (compounds: *vā'japastia* 1, *vrāpastia* 1, *ācpastia* 1, *tripastiā* 1; *pastiasād* 1), *-hastia* in compds.: *ubhayd-hastiā* 1, *mādhuhastiā* 1, *suhāstia* 3; *hāstya*, *pāthiā* 1, *rā'thia* 1, *gop'thia* 1, *yūthia* 3, *varāthia* 5, *ukthia* 40, *pārthiā* 1, *nādiā* 1, *sadhām'd'ia* 9, *anumd'ia* 4 (*-ya* 1), *āmedia* 5, *vēdia* 5, *caidiū* 2, *chandia* 1, *parjānyakrandia* 1, *vāndia* 11, *nīndia* 1 (compound: *anindiā* 1, *-ya* 1), *rā'dhia* 7 (compound: *yādrādhia* 1), *sādhia* 2, *mēdhia* 2 (compound: *mēdhīātithi* 9), *miyēdhia* 3, *yōdhia* 1, *vā'jagandhia* 1, *ārdhia* 2, *čārdhia* 1, *dhā'nia* 2 (compound: *dhāniākr't* 1), *nidhānia* 1, *māniā* 4, *jēnia* 15 (compounds: *svjēnia* 1; *jēniāvasu* 2), *vijēnia* 1, *marmrjēnia* 1 (*-ya* 1), *vāvrādhēnia* 1, *āmenia* 1, *venia* 1, *ēnia* 2 (compound: *asenia* 1), *vainia* 1, *yoniā* 1, *āghnia* 11, *aghniā* 7 (*-ya* 1), *čvitiā* 1, *budhnia* 1, *dushvāpnia* 8, *vāsnia* 1, *vičvapēnia* 4, *kirāhnia* 7 (*-ya* 1), *ā'pia* 15, *vātā'pia* 2 (*-ya* 2), *anāpiā* 1, *sāpiā* 2, *mayū'rācepia* 1, *ādābhia* 28, *dārdhiā* 1, *kū'mia* 15, *grā'miā* 1, *bhāmīā* 1, *kshemiā* 1, *komīā* 1, *stōmiā* 6, *sōmiā* 53, *sūmiā* 1, *pāritakmiā* 4, *vāk-miā* 1, *sākmia* 1, *paḡmiā* 1, *sūgmia* 5, *harmīā* 11 (compounds: *harmieshthā'* 1, *gharmieshthā* 1), *dāsmia* 1, *dkdyā* 1, *viā'd'ya* 1, *panā'd'ya* 1, *-pāyia* (compounds: *kūṇḍapā'd'ya* 1, *purrapā'd'ya* 1, *bahupā'd'ya* 2, *nṛpā'd'ya* 5), *uttamā'd'ya* 1, *purumā'd'ya* 1, *panā'd'ya* 1, *mahayā'd'ya* 1, *sprahayā'd'ya* 4, *ald'ya* 1, *ahnayā'd'ya* 1, *čravā'd'ya* 13, *dīdhi-*

shd'ya 2, *dakshd'ya* 4 (-*ya* 1), *vilantashd'ya* 4, *rasd'ya* 2, *mahd'ya* 1, *sahachya* 1, *stushya* 2, *d'ria* 12 (-*ya* 5), *varikaria* 1, *jaria* 1, *mandaria* 1, *naria* 1, *pa'ria* 5 (-*ya* 1), *va'ria* 64 (-*ya* 2); compound: *vicvavaria* 2), *dhitria* 1, *vtria* 75 (compounds: *drshatvria* 1, *svt'ria* 76, -*ya* 3), *vrtratv'ria* 8 (-*ya* 6), *aptlv'ria* 1, *hotrv'ria* 1 (-*ya* 1), *slv'ria* 16 (-*ya* 6 + compounds); compounds: *asvria* 1, *sv'riatvac* 4, *sv'riaracmi* 1, *sariaçv'it* 1), *dhv'ria* 1, *sairia* 1, *tugria* 4, *ajria* 1, *arcatria* 1, *çv'd'tria* 3, *citria* 2, *pitria* 12 (compound: *supitria* 1; derivative: *pitridvat* 1), *mitria* 1, *mitria* 1 (compound: *sumitria* 1), *çvitria* 1, *mardjalia* 1, *kd'via* 37 (-*ya* 2), *kavia* 6 (-*ya* 1); compound *asamasthakavia* 2), *dhv'via* 1, *durd'via* 1, *supravia* 2, *deviu* 3 (compounds: *çauradeviu* 1, *vicvadevia* 5, -*ya* 1, *suhadevia* 3, *sudevia* 2), *çevia* 1 (compound: *suçevia* 1), *davria* 64 (-*ya* 14), *r'tvia* 1, *kr'tria* 13, *pū'rria* 7, *pūrvia* 92 (compounds: *apūrvia* 10, *pūrvia* 25), *çv'ia* 25 (-*ya* 3; compound: *su-çv'ia* 11, according to Grassmann one of these -*ya*, at the end of a trishubh-pāda), *avv'ia* 4, *sauvav'ia* 2, *çv'ia* 2, *dirghajihv'ia* 1, *bhrd'cia* 1, *hi'ranyakeçia* 2, *veçia* 2, *dārcia* 1, *pāshia* 2, *pūshia* 1, *ahgūshia* 2, *çūshia* 3, *tveshia* 1, *eshaishia* 1, *jōshia* 1 (compound: *ajōshia* 1), *pōshia* 4 (compound: *sahasraposhia* 1), *kakshi'a* 5 (compounds: *dāçakakshia* 1, *apikakshia* 1, *kakshiaprd'* 2), *tākshia* 1, *pakshi'a* 1, *yākshia* 1, *antārikshia* 2, *varshia* 4, *āsi'a* 12 (compounds: *saptādsia* 1, -*ya* 3, *dāçamāsia* 2, *çmāsia* 1, *jūhū'-dsia* 1), *ayd'sia* 5, *çd'sia* 1 (compound: *acdsia* 1), *ānsia* 1, *çānsia* 18, *pūnsia* 45 (Grassmann one -*ya*, at the end of a trishubh-pāda), *kutsia* 1, *paurukutsia* 1 (*yā* 1), -*sdhia* (in the compounds: *prāndshd'hia* 1, *abhimatishd'hia* 1, *nshd'hia* 9, -*ya* 1), *jehia* 1, *āgohia* 1, *rānhia* 2.

β. Preceded by a short syllable: *sakhiā* 9 (-*ya* 6), *āpr'chia* (?) 3, *devayājia* 1, *tūjia* 2, *yūjia* 23, *gājia* 1, *karmajia* 2, *ūshmanjia* 1, *lakshmanjia* 1, *rājia* 4 (-*yā* 1 + 2 compounds) *adhisharajia* 1, *varunja* 1, *ātia* 8 (-*ya* 58), *pacajia* 1, *gopayājia* 1, *vratia* 1, *parvatia* 1, *dātīia* 5 (-*ya* 193 + 4 compounds), *çrūjia* 13 (in one compound -*ya*) *carik'tia* 5 (-*ya* 3), *sacathia* 2, *ucathia* 1, *vidathia* 1, *rāthia* 13 (-*ya* 4), *rathia* 2, *mādia* 12 (-*ya* 1), *h'p'dia* 3, *gādhia* 4, *anūi* 2 (-*ya* 184 + compound-), *ānia* 2, *jānia* 6 (-*ya* 2 + compounds), *rājanja* 1, *vrijanja* 1, *udanja* 1, *dhānia* 2 (-*ya* 2 + compounds; compounds: *çatadhanja* 1, *pradhanju* 1, *sadhanja* 1), *nabhanja* 3, *samanja* 1, *admanja* 1, *dhvanja* 1, *ahanja* 3, *āpiu* 10 (-*ya* 4), *dābhia* 2, *dāmia* 5, *yamja* 1, *aryamja* 1, *kshāmia* 2, *vayja* 6, *ariū* 1 (in the latter half of a trishubh-pāda; elsewhere always -*yā* 30), *ariū* 1, *nāria* 49 (-*ya* 1), *saparia* 1, *māria* 4 (-*ya* 28), *samaria* 2, *jāmaria* 1, *svaria* 8, *pūsharia* 1, *irja* 3 (-*ya* 2), *dūria* 8 (-*ya* 2), *asuri'a* 12 (-*yā* 15), *çāmulia* 1, *gāria* 3 (-*ya* 20 + compounds), *sugāvja* 1 (-*ya* 1), *ārjavja* 1, *dhavja* 1 (-*ya* 3), *yāvja* 1, *nāvja* 2 (-*ya* 25), *prāçavja* 1, *vasavja* 3 (-*ya* 7), *hāvja* 31 (-*ya* 7 + compounds), *divja* 68, *viçja* 2, *dr'cia* 1, *tishia* 2, *barhishia* 1, *manushia* 14 (-*ya* 7 + compound), *pūshia* 1, *vapushia* 4, *purushia* 1, *nahushia* 3, *chandasia* 1, *apasia* 1, *mamasia* 10, *çravasia* 10, *çāsia* 1, *sahasia* 8, *gūhia* 22 (-*ya* 4).

SUFFIX-FORM -*ya*.

α. Preceded by a long syllable: *sāubhāgya* 1, *d'jya* 1 (-*ia* 4), *jyāishthya* 2, *ç'dya* 2 (-*ia* 32), *rd'ndya* 2, *bhūshēnya* 1, *tūtyā* 2, *santya* 9, *agāstya* 1 (-*ia* 5), *hāstya* 1 (in compounds, -*ia*), *anum'dya* 1 (-*ia* 4), *anindya* 1 (-*ia* 1), *aghnyā* 1 (-*ia* 7), *marmrjēnya* 1 (-*ia* 1), *tirōahnya* 1 (-*ia* 7), *vātū'pya* 2 (-*ya* 2), *dakshd'gya* 1 (-*ia* 4), *d'rya* 5 (-*ia* 12), *pa'rya* 1 (-*ia* 5), *va'rya* 2 (-*ia* 64), *svi'rya* 3 (-*ia* 76), -*tūrya* (in *vrtratū'rya* 6, -*ia* 8, *çatratū'rya* 1), *hotrvū'rya* 1 (-*ia* 1), *slv'rya* 6 (-*ia* 16; *nd'ndsv'rya* 1), *kd'vya* 2 (-*ia* 37; *asamasthakavya* 2), *kāvya* 1 (-*iu* 6), *vicvadevya* 1 (-*ia* 5; *devia* 3, etc.), *dāivya* 14 (-*ia* 64), *çv'ya* 3 (-*ia* 25 + compounds: *suçv'ya* 1, see *çv'ia*), *vāçvya* 1, *id'rksya* 2, *saptādsya* 3 (-*ia* 1 + *dsia* 12), *pūnsyu* 1 (-*ia* 44, which see), *mātsya* 2, *paurukutsya* 1 (-*ia* 1), *nshd'hya* 1 (-*ia* 9).

β. Preceded by a short syllable: *sukhyā* 6 (-*ia* 9), *tuchyā* (?) 2, *d'rviijya* 1, *anapuvrijya* 1, *subrahmanyā* 1, *rānyā* 1 (-*ia* 4; compounds: *raṇyayit* 1, *raṇyavd'c* 1), *dranya* 2, *hiraṇya* 17 (compounds: *suhiraṇyā* 2; *hiraṇya-karma* 1, -*keçia* 1, -*keçia* 2, -*garbhā* 1, -*çakra* 1, -*jit* 1, -*jihva* 1, -*tvac* 1, -*danta* 1, -*dd'* 2, -*niraj* 2, -*nemi* 1, -*paksha* 1, -*parṇa* 1, -*pāni* 7, -*pāvū* 1, -*piṇḍ* 1, -*peças* 2, -*prāuga* 1, -*bāhu* 1, -*rathā* 1, -*ratha* 2, -*rūpa* 4, -*vandhura* 2, -*varṇa* 8, -*varlani* 8, -*vāçt* 2, -*rdçimut* 1, -*vīd* 1, -*vī* 1, -*çamyā* 1, -*çipra* 1, -*çruga* 1, -*saṁdrç* 3, -*stūpa* 1, -*hastu* 3, -*akshā* 1, -*abhicpu* 2), *arishanya* 1, *çrshanya* 2, *doshanya* 1, *ātya* 58 (-*ia* 8), -*patya* (in *kshāitrapatya* 1, *gd'rhapatya* 4, *sugdrhapatya* 2, *d'dhipatya* 1, *jāspatya* 2), *raivatya* 1, *satyā* 136

(compounds: *asatyá* 1, *vakmará'jasatyá* 1, *ṛtíjāttasatyá* 1, *mamasatyá* 1, *nd'satyá* 94, *indrāndsatyá* 1, *aprámisatyá* 1, *anusatyá* 1; *satyakarman* 1, *satyágirvāhas* 1, *satyādāharmān* 6, *satyadhvāt* 1, *satyāmadān* 1, *satyāmantra* 2, *satyāmanman* 2, *satyāmugra* 1, *satyayāj* 2, *satyāyoni* 1, *satyārādhās* 8, *satyavāc* 4, *satyācūvas* 2, *satyācūshma* 9, *satyācravas* 3, *satyācruś* 2, *satyasatvan* 1, *satyāsavi* 2, *satyādnṛtā* 1, *satyākti* 1), *-hūtya* (in *cūshnahātya* 1, *vṛtrahātya* 23, *ahihātya* 5, *duṣyuhātya* 6, *rakshohātya* 1), *ddityā* 193 (-ia 5; compound: *ddityājāta* 1), *ddityā* (adj.) 3, *sadhāstu-tya* 1, *upastūtya* 3, *-cruṭya* (in *mantra-cruṭya* 1; *ṛṭiā* 13), *-kṛtya* (in *vājā-kṛtya* 1, *andnukṛtyā* 2, *sūkṛtya* 1), *carikṛtya* 3 (-ia 5), *avyathā* 1, *rāthya* 4 (-ia 13), *ditihyā* 4, *pādyā* 4, *mādyā* 1 (-ia 12), *haviṛādyā* 5, *avadyā* 13 (compounds: *drāvadyā* 1, *guhādavadyā* 1, *anavadyā* 4, *anavadyārūpa* 1; *avadyagohana* 1, *mithāvadyāpa* 1, *avadyābhī* 1), *sādyā* 3 (upasādyā 2, *admasādyā* 1), *pārbbhādyā* 1, *patividyā* 1, *anind-tyā* 1 (-ia 1), *mādhya* 37 (compound: *vīmadhya* 2; derivatives: *madhyatās* 3, *madhyāndina* 8, *madhyamā* 18, *madhyamavāh* 1, *madhyamaś* 1), *ā'vadhya* 1, *-buddhya* (in *abuddhya* 1, *acrabuddhya* 3), *ayudhya* 1, *anyā* 184 (-ia 2; compounds: *anyākṛta* 3, *anyājāta* 2, *anyārūpa* 2, *anyāvṛta* 3, *anyōdarya* 1), *jānyu* 2 (-ia 6; compounds: *pā'ñcujanya* 7, *viçvājanya* 10, *sājanya* 1, *prātijanya* 2), *parjānya* 22 (compounds: *vātdparjānya* 1, *agniparjānya* 1; *parjānyokṛandya* 1, *parjānyajinvita* 1, *parjānyaretas* 1, *parjānyavṛddha* 1, *parjānyāvṛta* 3), *udanyu-* (in *udanyejā* 1), *dhānya* 2 (-ia 2; compound: *jivādhanya* 4), *pānya* 7, *punarmanya* 1, *vānya* 1, *āpya* 4 (-ia 10), *ṛjipyā* 6, *nābhya* 2 (compound: *abhinabhya* 1), *īdhya* 1, *hiranyāca-mya* 1, *hṛdayā* 1, *aryā* 30 (-iā 1, -iā 1; compound: *aryūpatnī* 2; derivatives: *arya-mān* 108, *aryumia* 1), *kārya* 1, *ṛutārya* 1, *ānyōdarya* 1, *nārya* 1 (-ia 49), *mārya* 28 (-ia 4; compounds: *māryacṛt* 1, *maryā'dd* 3; derivatives: *maryakā* 1, *mary-atās* 1), *samaryā* 12 (compounds: *-jī't* 1, *-rā'jya* 1), *sādhvuryā* 1, *čārya* 3 (com-pounds: *gočārya* 3; *čaryahān* 2; derivative: *čaryanā'vat* 7), *īrya* 2 (-ia 3), *ajuryā* 15, *dūrya* 2 (-ia 8), *pūrya* 1, *asuryā* 15 (-ia 12), *pālatyā* 1, *čalyā* 1, *khilyā* 2, *āvya* 24, *kavyā* 3 (derivative: *kavyāitā* 1), *gāvya* 20 (-ia 3; derivatives: *gavyāya* 2, *gavyāyā* 2), *suḡāvya* 1 (-ia 1), *tārya* 1, *vāyavyā* 1, *nāvya* 25 (-ia 1), *bhāvya* 3 (-ia 1), *pačaryā* 1, *anishavyā* 1, *savyā* 7 (compound: *sushavyā* 1), *vasavyā* 7 (-ia 3), *hāvya* 7 (-ia 31), *havyā* 124 (compounds: *rātāhavya* 16, *vītāhavya* 3, *vṛṣṭīhavya* 1, *svēdūhavya* 2, *suahavyā* 2, *havyājushti* 2, *havyādditi* 17, *havyavāh* 32, *havyavā'dhana* 17, *havyasā'd* 2, *havyā'd* 1), *dīrya* 26 (-ia 68), *abhrātṛryā* 1, *apačyā* 1, *ṛ'čya* 1 (compound: *ṛčyadā* 1), *kurishyā* 1, *havishyā* 1, *manushyā* 7 (-ia 14; compound: *manushyējā* 1), *duçāntarushyā* 1, *unādhr̥shyā* 4, *apramṛshyā* 4, *tripājasyā* 1, *avida-syā* 1, *tuvasyā* 1, *sahasya* 2 (-ia 8), *nṛśāhya* 2, *gūhya* 4 (-ia 22).

The preceding lists show that the suffix-form *-ia* occurs more frequently than *-ya*. Especially is this the case if only simple words are considered. Counting, according to the arrangement above, all simple words, whether found alone or only in one compound, by themselves, and all other compounds and derivatives by themselves, we arrive at the following results:

-ia after a long syllable 1552 times (1284 times in 192 single words, and 268 times in 67 compounds and derivatives); *-ia* after a short syllable 462 times (459 times in 85 single words, and 3 times in 3 compounds).

-ya after a long syllable 91 times (80 times from 35 single words, and 11 times from 5 compounds); *-ya* after a short syllable 1747 times (1145 times from 94 simple words, and 602 times from 147 compounds and derivatives).

To the preceding should perhaps be reckoned 29 words with the suffix *-iya* (*-iya*), which presumably stands for *-ia*. Four of them actually occur in two forms (*mitriya* or *mitria*, *ṛtviya* or *ṛ'tvia*?, *apviyā* or *apviā*, *nāviya* or *nāvia*).

The suffixes of compounds and derivatives agree so closely with those of the simple words (or with one another, in the few cases where the simple word is found only in composition) that in 222 words (884 times) falling under the category there are, all told,

only eleven absolute exceptions: (*âsamashîa-kâvya*, *janîya* in four compounds, *nd'nâsûria*, *manushyajâ*, *viçva-dêvia*, *hastîa* in three compounds) to that rule; six other compounds (*antindîa*, *nṛshâ'hîu*, *viçvâdevîa*, *vṛtratû'ria*, *saptâ-âsia*, *suvirîa*) vary, though prevailingly adhering to the rule.

Among all the simple words (used alone or only in composition), there are 47 which are found with both *-ia* and *-ya*. A comparison will show, however, that they as a rule are used very prevailingly with one of the two forms of suffixes (in two thirds of the cases with *-ia*); and that the exceptional termination is, in one half of the instances, a *ἀπαξ λεγόμενον*:

	<i>-ia</i>	<i>-ya</i>		<i>-ia</i>	<i>-ya</i>		<i>-ia</i>	<i>-ya</i>
<i>sakh-îâ</i>	9	6	<i>âp-ia</i>	10	4	<i>gâv-ya</i> }	3	20
<i>d'j-ia</i>	4	2	<i>valâ'p-ia</i>	2	2	<i>gav-yâ</i> }		4
<i>î'd-ia</i>	33	2	<i>dakshâ'y-ia</i>	4	1	<i>nâv-ya</i>	2	25
<i>rân-î-ia</i>	4	1	<i>ar-yâ</i> }		30	<i>vasav-yâ</i>	3	7
<i>ât-ya</i>	8	58	<i>ar-îâ</i> }	1		<i>hâv-ya</i>	7	30
<i>âdît-yâ</i>	5	193	<i>nâr-ia</i>	49	1	<i>kâ'v-ia</i> }	37	2
<i>carîṛ't-ia</i>	5	3	<i>mâr-ya</i>	4	28	<i>kâv-îâ</i> }	6	1
<i>agâst-ia</i>	5	1	<i>d'r-ia</i>	12	5	<i>div-îâ</i>	68	26
<i>hâst-ia</i>	comp's.	1	<i>pâ'r-ia</i>	5	1	<i>dâiv-ia</i>	64	14
<i>râth-ia</i>	13	4	<i>îd'r-ia</i>	64	2	<i>âçv-ia</i>	25	3
<i>mâd-ia</i>	12	1	<i>îr-ia</i>	3	2	<i>manush-îa</i>	14	7
<i>anumâ'd-ia</i>	4	1	<i>âûr-ia</i>	8	2	<i>sahas-îa</i>	8	2
<i>an-yâ</i>	2	184	<i>asur-yâ</i> }		15	<i>âsi'a</i> }		12
<i>jân-ia</i>	6	2	<i>asur-î'a</i> }	12		<i>saptâ-dya</i> }	1	3
<i>dhân-ia</i>	2	2	<i>vṛtratû'r-ia</i>	8	6	<i>pâûhs-ia</i>	44	1
<i>aghî-îâ</i>	7	1	<i>hotṛcû'r-ia</i>	1	1	<i>paurukuts-îâ</i>	1	1
<i>tîrâhn-ia</i>	7	1	<i>sû'r-ia</i>	16	6	<i>nṛshâ'h-ia</i>	9	1
						<i>gûh-ia</i>	22	4

If, in the preceding list, all the words with a prevailing *-ia* suffix be deducted from the 129 single words with *-ya* suffixes, this number is considerably reduced, and the disproportion between the occurrence of *-ia* and *-ya* is made still more marked.

It is evident from the absolute or prevailing regularity of the suffix for the same word in its various occurrences, singly or in composition, that the use of *-ia* or *-ya* was not a matter of mere accident or arbitrary choice, but determined by some underlying principle, and required by usage. The following considerations will help to determine this principle.

a. The place of the accent, as will be seen by comparison, has an influence only when the suffix takes the circumflex (marked *-îâ*, *-yâ*), in which case the form *-ia* is almost invariably met with, there being 81 words in *-ia* to 8 in *-yâ*, and 4 both ways. This phenomenon seems connected with the derivation of the word (comp. c, below).

b. The quantity of the syllable which precedes the suffix seems decidedly to influence its treatment. This has been pointed out already by Sievers, in his *Zur Accent- und Satzlehre*, where he lays it down as a definite rule that (unless the suffix has the circumflex) a long syllable is followed by *-ia* (*-ua*), and a short, with a few exceptions, by *-ya* (*-va*). The actual facts are, according to the

preceding statement, these (compounds, of existing simple words, as almost wholly agreeing with them, being left out of account): a long syllable is followed in 192 distinct words (in 40 of which the suffix has the circumflex) by *-ia*, and in 35 simple words (all without the circumflex) by *-ya*. A short syllable is followed in 85 distinct words (in 45 of which the suffix has the circumflex) by *-ia*, and in 94 simple words (in 12 of which the suffix has the circumflex) by *-ya*. The connection between the two phenomena seems therefore very marked, though not absolute; and the influence of quantity together with that of the accent seems to account, better than anything else, for the use of *-ia* or *-ya*. Only some considerations of a general nature, to be mentioned hereafter, seem to explain the discrepancies.

c. The derivation of the word offers especially one interesting point for consideration, and does not seem to be unconnected with the nature of the suffix. It is, namely, remarkable that words clearly derived from a theme in *-a* (as *gánia* from *ganá*) take, almost without exception, the form of suffix *-ia*. Of 110 such derivatives, there are only 8 absolute (2 sporadic) exceptions to this rule. The following lists present all the cases, waiving a few, the derivation of which is uncertain:

anúki'a (*ánúka*), *ángia* (*ánga*), *gángia* (*gaṅgá*), *yávishtia* (*yávishta*), *prshthi'a* (*prshthá*), *gánia* (*ganá*), *lakshman'i'a* (*lakshmaná*), *ránia* 4, *-ya* 1 (*rána?*), *adhishavani'a* (*adhishávaṇa*), *varuni'a* (*várūṇa*), *drónia* (*dróna*), *sávarṇiú* (*sávarṇa*), *pacati'a* (*pacatá*), *vrali'a* (*vralá*), *parvati'a* (*párvata*), *sajáti'a* (*sajdlá*), *dúti'a* (*dútlá*), *çvetiú* (*çvelá*), *ádhigartia* (*adhigártia*), *mártia* (*martá?*), *-hástia* (*hásta*) in 5 compounds, but *hástya* 1, *sacathi'a* (*sacátha*), *vidathi'a* (*vidátha*), *çapathi'a* (*çapátha*), *ráthia* (*-ya* 3) and *rathi'a* (*rátha*), *gop'thia* (*gopthá*), *yúthi'a* (*yúthá*), *varáthi'a* (*varáthá*), *ukthi'a* (*ukthá*), *madi'a* 12, *-ya* 1 (*máda*), *sadhama'dia* (*sadhama'da*), *chándia* (*chandá*), *médhia* (*medhá*), *miyédhia* (*miyédha*), *çárdhia* (*çárdha*), *jánia* 6, *-ya* 2 (*jána*), *vṛjani'a* (*vṛjána*), *dhánia* 2, *-ya* 2 (*dhána*), *samani'a* (*sámana*), *dhd'nia* (*dhd'na*), *nidháni'u* (*nidhá'na*), *mániá* (*má'na*), *veniá* (*vená?*), *senia* (*séná*), *vainiá* (*vená*), *çvitniá* (*çvi'tna*), *budhni'a* (*budhná*), *dushvápnia* (*dushvápná*), *vásnia* (*vasná*), *mayú'raçepia* (*mayú'raçepa*), *dárbhiá* (*dárbhá*), *yami'a* (*yamá*), *grámiá* (*grá'ma*), *kshemiá* (*kshéma*), *stómiá* (*stóma*), *somiá* (*sóma*), *sáumia* (*sóma*), *çagmi'a* (*çagmá*), *dásmia* (*dasmá*), *purumá'yia* (*purumdyá*), *samari'a* (*samará*), *jári'a* (*jára*), *mándáriú* (*mándára*), *pá'ria* 6, *-ya* 1 (*pára*), *dhí'ria* (*dhí'ra*), *ví'ria* (*ví'rá*), *asúria* (*ásura*), *túgria* (*túgra*), *ajri'a* (*ájra*), *arcotri'a* (*arcatra?*), *çvát'ria* (*çvát'rá*), *citria* (*citrá*), *çvít'ria* (*çvít'rá*), *jávia* (*jáva*), *návia* 2, *-ya* 25 (*náva*), *devi'a* (*devá*), *çévia* (*çéva*), *dáivia* 64, *-ya* 14 (*devá*), *párvia* (*pá'rvá*), *ácvia* 25, *-ya* 3, and *açvia* (*ácva*), *dīrghajihvi'a* (*dīrghajihvá*), *veç'i'a* (*veçá*), *purishi'a* (*pú'risha*), *purushi'u* (*púrusha*), *nahushi'a* (*náhusa*), *aṅgushi'a* (*aṅgushá*), *çáshi'a* (*cúshá*), *tveshi'a* (*tveshá*), *kakshi'a* (*káksha*), *pakshi'a* (*pakshá*), *yákshia* (*yakshá*), *antárikshia* (*antáriksha*), *varshi'a* (*varshá*), *ánstia* (*ánsta*), *kutsiá* (*kútsa*).

Only the following 10 derivatives from themes in *-a* take the suffix *-ya*:

jyáishthya (*jyéshtha*), *áranya* (*árana*), *tátyá* (*latí*), *hástya* 1, in composition *-ia* (*hásta*), *ványa* (*vána*), *i'bhya* (*i'bha*), *hṛdayá* (*hṛ'daya*), *ánvodarya* (*anyodára*), *çárya* (*çará*), *asuryá* 15, *-ia* 12 (*ásura*).

Words of other derivation do not admit of so satisfactory classification, although there is a pretty general tendency in words derived directly from verbal roots to take the suffix *-ia*.

d. Aside from those words which are found with both suffixes,

only the following are not reducible to any of the preceding principles:

13 words in *-ia* instead of the expected *-ya* (note the accent):

âp'r'chia, *devayâjia*, *yûjia*, *gopayâtia*, *âditiâ*, *crûtia*, *h'r'dia*, *gâdhia*, *ânîa*, *dâmin*, *jd'maria*, *bhâvia*, *pûshia*. (13 others are used both ways, though prevailing with *-ia*.)

15 words in *-ya*, instead of the expected *-ia*:

siubhâgya, *jyâishthya*, *rd'ndya*, *tâtyâ*, *santya*, *tî'rkshtya*, *mâtsya* (18 others are used both ways, though very prevailing with *-ia*):—*çrshanyâ*, *doshanyâ*, *hṛdayâ*, *pâtalyâ*, *vâyavyâ*, *paçavyâ*, *havishyâ*, *tuvasyâ* (4 others, *aryâ*, *vasaryâ*, *manushyâ*, *sakasyâ*, are used both ways, the first two prevailing with *-ya*, the others with *-ia*).

The conclusion to be drawn from the preceding facts seems evidently to be this: that *-ia* was the original form of the suffix, and that it still on general organic principles maintains its supremacy in the *Rig-Veda*. The primitiveness of *-ia* is supported in the first place by the frequent occurrence of a circumflex on the suffix, which presupposes an original vowel-value of its semivowel; and by the significant coincidence of this circumflex and the vocalization required by the metre. (Compare on this subject Benfey's "Ist in der indogermanischen Grundsprache ein nominales Suffix *ia* oder statt dessen *ya* anzusetzen?") Further, it is supported by the formation of words in *-ia* from themes in *-a*. More than one third of all words in *-ia* show clearly such a genesis; and the proportion might amount to about one half, were only the possible intermediate links of words supposed to be derived immediately from roots discovered, and the etymology of a few uncertain words known. If a suffix *-ya* had been evolved and ready to be added to nouns in *-a* there would have been no reason, as it appears, for dropping the final *a* of the theme, *-aya* being easily pronounced. But if the suffix was *-ia*, the case would have been different. The concurrence of three vowels (*aia*) required a modification of some sort, and then, the suffixal *i* being retained, the thematic *a* was dropped. The occurrence of 22 cases where an accented final *î* of the base corresponds to an accented *î* of the suffix is significant enough, and shows a tendency to transmit the accent of the final *a* to its substitute *i*. Or should we recognize here traces of the primitive evolution of the *ia*-suffix, seeing in *i* nothing but a weakening of the thematic *-a*, to which the old and common suffix *a* was added? Finally, the primitiveness of *-ia* is supported by the prevalence of that suffix in the earliest records of the language, and its gradual change into *-ya* through later periods.

This weakening tendency was checked in the Vedic period especially by the stress laid on *i* by accentuation; by the suffix being preceded by a long syllable, which protected, as it were, its identity; and by some obscure influence of the formative process which seems connected with the phenomenon of accent. Out of the whole number of not less than 408 words (or 630, with the compounds) which take the suffix *-ia* or *-ya*, only 28 (see above)

form an absolute, and a few more a partial, exception to any and all of these three principles.

How to account for these 28 is not easy, except by the following general consideration. As the whole language shows a gradual change from the *ia* to the *ya*-form of suffix, the discrepancies may depend, in part at least, simply on a difference in the time when the words were used. They may also be due partly to arbitrary choice and to corrupted texts. The fact that usage was not stereotyped, that the whole thing was involved in a process of change, would naturally give a freer scope to metrical requirements, and thus allow inconsistencies; and in spite of the general trustworthiness of the text such as we possess it, palpable changes obviating the seeming irregularities of the suffix could be suggested if called for. As for the varied suffixal form of the same word, it can be accounted for very naturally by one of the hypotheses just mentioned. In regard to the 13 (or 28) words in *-ia* preceded by a short syllable, it is worth noticing that one half of them are derived from verb-roots (sometimes, no doubt, through a lost intermediate link in *-a*), and five from a root-noun.

We proceed now to take up the other suffixes.

SUFFIX-FORM *-ia*.

- a. Preceded by a long syllable: *pāki'ā* 3, *yogiā* 3, *ceṭiā* 1, *pasti'ā* 10, *vediā* 7, *rā'miā* 4, *pāritakmiā* 6, *ū'rmiā* 7, *sūriā* 18 (*-yā* 7; compounds: *sū'riāmā* 1, *-yā* 4, *sū'riāvā* 1), *nāviā* 3, *cyāviā* 1, *kakshīā* 3.
- b. Preceded by a short syllable: *pathiā* 24, *pādiā* 1 (*-yā* 3), *kanīā* 16 (*-yā* 1), *camīā* 1, *hīmiā* 1, *kūliā* 1 (*-yā* 1), *yaviā* 3, *caraviā* 1 (*-yā* 1), *hāviā* 1.

SUFFIX-FORM *-yā*.

- a. Preceded by a long syllable: only *sūryā* 7 (generally *-iā* 18), *sūryācandramā* 3, *sū'ryāmā* 4 (*-iā* 1).
- b. Preceded by a short syllable: *devayñjyā* 7, *jaranyā* 1, *ishanyā* 1, *muṣṭi-hatyā* 1, *ityā* 2, *kṛtyā* 1, *sukṛtyā* 9, *pādyā* 3 (*-iā* 1), *jātavidyā* 1, *ishuḥyā* 1, *ṣṭāhyā* 1, *kanyā* 1 (*-iā* 16), *vipanyā* 5, *cāryā* 4, *kūtyā* 1 (*-iā* 1), *gavyā* 4, *caravyā* 1 (*-iā* 1), *avishyā* 1, *taviṣhyā* 1, *vapushyā* 1, *urushyā* 1, *vacasyā* (compound: *svacasyā*), *vedhasyā*, *apasāyā*, *svapasāyā*, *ṣṭaddhāmanasyā* 1, *namasyā* 1, *varasyā* 2, *irasyā* 1, *ṣravasyā* 8 (compound: *suṣravasyā*), *varivasyā* 1, *daṣasyā* 1.

The preceding lists show that the form *-iā* occurs in 21 simple words (used alone or only in composition), and in these in 91 instances; and the form *-yā* in 33 such words, and in 85 instances. Five words are found with both forms. The principles found to prevail with the *-ia*, *-ya* suffixes are clearly noticeable here also. Long syllables, indeed, are followed by *-iā* alone (with only one partial exception). Short syllables are followed only 9 times by *-iā* (3 of these have the circumflex, one other is evenly divided between *-iā* and *-yā*, with one occurrence for each; one, *pādiā*, is prevailingly used with *-yā*). It is worthy of notice that all the simple words in *-yā* have the accent on *ā*, except *kanyā*, *pādyā*, and *cāryā*, while this is the case with only one third of the words in *-iā*.

SUFFIX *-yu* (never *-iu*).

çamîyú 2, *ahamîyú* 1, *kimîyú* 1, *yájyu* 10 (compounds: *áyajyu* 5, *práyajyu* 12, *âtgrhîsprayajyu* 1, *áyajyú* 1), *irajyú* 1, *bhujyú* 17, *mrganyú* 1, *caranyú* 1, *jaranyú* 1, *saranyú* 5, *turanyú* 3, *bhuranýú* 1, *ruvanýú* 1, *rishanyú* 1, *ukshanyú* 1, *ishudhyú* 1, *çundhyú* 9, *tanyú* 1, *prtanyú* 5, *udanyú* 3, *vipanyú* 14, *kubhanyú* 1, *manyú* 60 (compounds: *vṛ'shamanyu* 1, *ánuttamanyu* 3, *á'pāntamanyu* 1, *saiknāmānyu* 1, *upumunýú* 1, *vṛ'shamanyu* 1, *sámanyu* 8, *sumanyú* 1, *prácāmūnyu* 1, *parimanyú* 1, *vīmānyu* 1, *tuvimānyu* 1, *āhimānyu* 1, *raghumānyu* 1; *manyumî* 3, *manyusdîtn* 1; derivative: *manyumât* 2), *syāmānyú* 1, *yuvanyú* 1, *çimyu* 2, *atharyú* 1, *saparyú* 1, *adhvaryú* 53, *svaryú* 1, *gavyú* 13, *sanishyú* 6, *avishyú* 3, *urushyú* 1, *makhasyú* 1, *vacasyú* 4, *gīrvaṇasyú* 1, *draviṇasyú* 4, *dāsyu* 64 (compounds: *brāsādasýu* 12; *dāsyuhīta* 1, *dāsyukuraṇa* 1, *dāsyuhītya* 6, *dāsyuhān* 10), *panasyú* 5, *manasyú* 1, *apasyú* 6, *namasyú* 2, *avasyú* 30, *sāyavasyú* 1, *çravasyú* 19, *duvasýú* 2, *sāhyu* 1, *druhýú* 6.

There are consequently 50 simple words (378 occurrences), aside from 24 compounds, which take the suffix *-yu*. It will be noticed that in every instance the suffix is preceded by a short syllable. A majority of the words are derived from denominative bases (as *caranyú* from *carany*, *manasyú* from *manasy*, etc.); and all—with the exception only of *yájyu*, *çimyu*, *dāsyu*, *sāhyu*—are accented on the *u* of the suffix. As will be seen further on, all denominative verbs without exception have likewise the semi-vowel *y*.

SUFFIX *-tia*, *-tya*.

Form *-tia*: *nî'shṭia* 3, *á'vishṭia* 2, *amá'tia* 1.

Form *-tya*: *ápatya* 6 (compounds: *anapatýú* 1, *suapatýú* 17, *apatyasá'd'*), *nî'tya* 34, (compounds: *nî'tyastotra* 1, *nîtyahotṛ*, *nî'tyātritra* 1), *sánutya* 3, *santya* 9.

Gerunds ending in *-tya* (as *kṛtya* etc.) are treated under the verb. In the preceding adjectives it will be observed that the *i* of the suffix is preceded by a long and the *y* by a short syllable (with the exception of *santya*).

SUFFIX *-nia*, *-nya*.

Form *-nia*: *nîñiá* 2 (*-yú* 8), *dhi'shñia* 14.

Form *-nya*: *nîñyá* 8 (*-iá* 2), *púnnya* 1.

In these three words also the quantity of preceding syllables is long before *i* and short before *y*.

SUFFIX *-enia*, *-enya*.

Form *-enia*: *varénia* 38 (compound: *varēniakratu* 3), *vitrénia* 1, *advishēñia* 1, *ukshēñia* 1, *idénia* 9, *marmṛjénia* 1 (*-ya* 1), *kirténia* 2, *yudhénia* 1, *vācṛdhénia* 1, *uçénia* 1, *dṛçénia* 1.

Form *-enya*: *saparyēnya* 1, *bhāshēnya* 1 (*ābhushēnya* 1), *didṛkshēnya* 2, *papṛkshēnya* 1, *marmṛjēnya* 1 (*-ia* 1).

The expected *-enia* occurs in 11 words out of 15 (one being used both ways). Of the five verbal adjectives in *-enya*, one (*saparyēnya*) is from a denominative, three are from a reduplicated base, and only one (*bhāshēnya*) from the simple verb. It will be noticed that all the fifteen participial adjectives are accented on the *e*.

SUFFIX *-yas* (never *-ias*).

pānyas 5, *sānyas* 3, *rābhyas* 1, *tāvyas* 1 (compound: *ātavyas* 2), *nāvyas* 46, *vāsyas* 39, *sāhyas* 3.

All these are only exceptional comparative-formations (*īyas* = *ias*, *yas*); and four of them alternate with the usual forms (*pānīyas* 5, *tāvīyas* 5, *nāvīyas* 31, *sihīyas* 9). It will be noticed that *-yas* is in each case preceded by a short syllable.

SUFFIX *-tyu* (never *-tiu*).

mṛtyu 15 (compounds: *āmṛtyu* 4, *mṛtyubāndhu* 2).

In considering together all the preceding suffixes with the exception of *-ia* and *-ya*, which on account of their exceeding frequency have been treated by themselves, it will be found that *i* occurs 143 times after a long and 51 times (in 41 of which it has the circumflex) after a short syllable; but *y* 32 times after a long, and 605 after a short syllable. Only simple words and isolated compounds are then counted.

SUFFIXES CONTAINING A *u* OR *v*.

These are of much less frequent occurrence than the preceding. As there is no exception to the rule that compounds and derivatives retain the suffix of the simple word (or agree with one another), it is needless to rehearse them all, especially as they are quite numerous.

SUFFIX *-ua*, *-va*.

Form *-ua*: *tā'nua* (fr. *tanū*) 1, *tā'nua* (fr. *tanva*) 1, *tī'nua* (fr. *tan*) 2, *āruā* 1 (*-vā* 20), *ācua* 4 (*-va* 224, with 58 compounds and many derivatives. The four forms in *-ua* seem therefore very doubtful or anomalous).

Form *-va*: *takvā* 1, *pakvā* 25, *srākvā* 3, *vākvā* 2, *ṛkvā* 1, *kaṇvā* 50, *prāskanva* 5, *raṇvā* 28, *ārdhvā* 71, *ākharva* 1, *gandharvā* 20, *anarvā* 4, *sārvā* 49, *ārvā* 20 (*-vā* 1), *pā'rvā* 120, *ācva* 224 (*-ua* 4, see above), *ṛcva* 307, *ṛcvā* 49, *yahvā* 21.

The preceding lists show that the suffix *-va* is the law, and that *-ua* is at best only a sporadic and doubtful exception. It occurs alone only in the three exceptional forms *tā'nua*. Its presence in *ācua* is, as pointed out above, anomalous; and in the only remaining form *āruā*, where it occurs once out of 21 times, this is in the second part of a catalectic *trishtubh-pādu* (ix.87.8). The suffix *-va* occurs in 19 simple words (1001 instances), and in more than a hundred compounds and derivatives formed from those simple words. In 15 of the 18 words, the syllable preceding the suffix is short, so that the preservative influence which a long syllable seems to exercise is here almost entirely lacking. This may have aided the general conversion of *u* to *v*.

SUFFIX *-tua*, *-tva*.

Form *-tua*. This suffix occurs in nouns only in: *pētua* 1, *rak-shastuā* 1, *nāvavāstua* 1 (*-va* 2).

In gerundives the formation is presumably from an infinitive noun in *-tu*, whence also the prevalence (see below) of the vocalized form. It should properly be considered along with stems in

-u, but is conveniently given here on account of the uncertainty of the formation. The gerundives are:

kártua 14 (-*va* 3), *jántua* 1 (but *jánitva* 4, and *janitvá* 1, a noun from *jáni*), *jétua* 1, *nántua* 1, *vántua* 2, *sótua* 1, *end'tua* 1, *hántua* 1, *hétua* 1.

Form -*tva*. With the exception only of the three nouns quoted above (each a ἄπαξ λεγόμενον), this form of suffix occurs in all nominal (almost exclusively neuter abstract) formations in question, which therefore need not be enumerated. There are 31 of them (aside from several compounds), and 145 instances. The suffix is in 30 words preceded by a short vowel (as *garbhatvá*, *asuratvá*, etc.), and in only three cases (*andgástvá* 7, *suprajástvá* 2, *návavástva* 2, -*tua* 1) by a long syllable; whereas -*tua* is found after a long syllable in the remaining nouns (see above). All the simple words belonging here accent invariably the *a* of the suffix; and it is worth noticing that the gerundives, on the contrary, accent the verb-root, and that *pétua* (not an abstract) also accents the root.

In gerundives (compare what is remarked above under -*tua*) -*tva* is found in *kártva* 3 (-*ua* 14) *jánitva* 4, *sánitva* 1, *bhávítva* 1—all, save the exceptional *kártva*, after the auxiliary vowel *i* (î).

SUFFIX -*ud*, -*vd*.

Form -*ud*: *apud'* 1.

Form -*vd*: *dú'rvá* 2, *jíhvá'* 44.

SUFFIX -*vi* (never -*uí*).

dárvi 2, *súçiví* 1, *ghṛ'shvi* 13.

SUFFIX -*vi* (never -*uí*).

prítv' 10, *má'dhvi* 2, *gandharv'* 1, *parapharv'* 1, *yahv'* 21—all feminines with accented suffix.

SUFFIX -*vant* (never -*uant*).

This suffix, forming possessives from nouns (only in half-a-dozen exceptions from verb-roots), occurs in 66 words (about 335 instances), and is in all of them—save *açi'rvat* 2, *dā'svat* 7, *bhā'svat* 2—preceded by a short syllable.

SUFFIX -*van* (never -*uan*).

This suffix, generally added to verb-roots, occurs in 49 distinct words (about 150 instances; also in 47 compounds). It is preceded in every simple word by a short syllable. The accent is never on the suffix, even in compounds, except in *aparván* (*pār-van*).

SUFFIX -*vas* (*vāhs*), *uas*(*uāhs*).

Nearly all words with this termination are perfect active participles; only a few are of doubtful formation. The latter will accordingly be given by themselves.

a. Perfect active participles:

jaghanvās 17, *cikivās* 45, *jujurvas* 2 (-*uās* 1: ii.4.5), *jujushvās* 2, *tatanvās* 3, *ñirvās* 2, *tastabhvas* 1, *daddāvās* 1, *dadçvās* 1, *dadasvās* 1, *dadvās* 1, *dadhamvās*

3, *dadhṛshvās* 3, *pupushvās* 1, *vḍṛdhvās* 2, *vivikvās* 1, *vividvās* 2, *ṣuṣukvās* 4, *edsahvās* 4 (-*uās* 1);—(without reduplication): *dāḥvās* (?) 8 (-*uās* 6), *vidvās* 103 (-*uas* 3), *sāhvās* 10.

b. Of uncertain relation:

cakhvās 1, *khidvas* 1, *mādhvās* 8 (-*uās* 7), *ṛ'bhvas* 4, *ṣi'kvas* 4 (*dāḥvās* ?, see above).

There are consequently 27 words (235 instances) in *-vas* (*vāns*); and only 4 of them are sporadically (altogether 18 times) found with the suffix *-uas*. In 24 of these 27 words the *-vas* is preceded by a short syllable, and only in *dāḥvās* (also *-uas*) and *sāhvās*, *mādhvas* by a long. They all accent the termination, except the uncertain *ṛ'bhvas*, *ṣi'kvas* (*khidvas* is unaccented).

SUFFIX *-vana* (never *-uana*).

anarvāṇa 3, *ṣuṣukvanā* 1, *vagvanā* 1.

SUFFIX *-vara* (never *-uara*).

ī'tvara 1, *adhvarā* 191, *kārvara* 2, *phārvara* 1, *apiṣarvarā* 2.

SUFFIX *-vala* (never *-uala*). *vi'dvala* 1.

SUFFIX *-tvana* (never *tuana*).

satvanā 2, *sakhitvanā* 2, *patitvanā* 1, *janitvanā* 1, *mahitvanā* 13, *vasutvanā* 4.

SUFFIX *-vatī* (never *-uati*).

dṛshādvatī 1, *ārvatī* 3.

SUFFIX *-vani* (never *-uani*).

ṣuṣukvani 1, *jujurvāni* 1, *turvāni* 8, *tuturvāni* 1, *bhurvāni* 2, *arharishvāni* 1, *dādhṛshvāni* 1. It is always preceded by a short syllable and accented.

SUFFIX *-vati* (never *-uati*).

All such feminine formations (*vākvarī*, *ṣākvarī*, *yājvarī*, etc.), except *ṣārvarī*, have a corresponding masculine form in *-van*, and take, like these latter, the accent on the radical syllable; and the suffix is preceded, without exception, by a short syllable.

SUFFIX *-vin* (never *-uin*).

dṛṣhadvin 1, *ṣatasvin* 1, *namasvin* 8, *tirasvin* 2, *rakshasvin* 7. In all cases preceded by a short syllable, and accented (except in the comp. *āyudhvin*).

In considering together all these suffixes with an integral *u* or *v*, it will be found that *u* occurs 47 times after a long and 7 times after a short syllable, but *v* 266 times (chiefly owing to *pū'rvā* 120, and *ārdhvā* 71) after a long, and over 2000 times after a short syllable.

For the gerunds in *-yā* (*-ya*), *-tvā*, *-tvī*, *-tvāya*, see under verb-inflection.

II. IN DECLENSIONAL ENDINGS.

The case-suffixes of which *i* or *y* forms an integral part are *śya* (*śia* ?), *śyās* (*śiās*), *śyai*, *hya(m)*, *bhya(m)* (*bhiani*), *śyām*, *bhyām* (*bhiām*), *bhyas* (*bhiās*). A summary statement of all the cases with reference to the quantity of the preceding syllable is here given. (For a detailed treatment of the case-suffixes of the nouns see the article referred to p. 70).

-*syā* after short syllable nearly 4000 times (fr. 697 stems), -*sia* of doubtful, or, rather, very exceptional occurrence (see Lanm. p. 338); -*syās* after short syllable about 70 times (fr. 8 stems), -*sīts* after short syllable twice (fr. 2 stems); -*syai* after short syllable 11 times (fr. 5 stems); -*hya(m)* after short syllable 28 times (fr. 1 stem: in 13 instances -*hya*); -*bhya(m)* after short syllable 205 times (*asmā-bhyam* 108, *tūbhyam* 97), -*bhiam* only once in *yushmābhiam* (i.88.3); -*syām* after short syllable 11 times (fr. 5 stems); -*bhyām* after short syllable 47 times (fr. 15 stems), after long syllable 38 times (fr. 26 stems), -*bhūm* after long syllable 3 times (fr. 3 stems); -*bhyas* after short syllable 192 times (fr. 61 stems), after long syllable 200 times (fr. 95 stems), -*bhias* after long syllable 120 times (fr. 76 stems), after short syllable twice (fr. 2 stems).

The vowel *i* is consequently found altogether in 128 instances, and the semivowel *y* in nearly 4800 instances (from which should be deducted perhaps a few in -*asya*). Moreover, the vowel is found in 123 instances after a long syllable (chiefly in *a*-stems, 72 times), and only 5 times after a short syllable (twice in an *i* and a *van*-stem, and three times in pronouns); and the semivowel in nearly 4500 instances (564 if the overwhelming number presented by -*asya* be deducted) after a short syllable, and 238 instances (chiefly, or 179 times, in vowel-stems) after a long syllable. It seems evident therefore that we may trace also here that preservative influence of a preceding long syllable which was clearly operative in connection with the derivative suffixes. The exceeding frequency of the suffix -*asya* suggests how universal was the alterative tendency when the repeated use of the form, the quantity of the word, and the dimness of formation of the suffix all conspired to the same end.

III. IN VERB-INFLECTION.

Whatever be the varied combinations and functions of *y* (*î*) or *v* (*u*) in verb-inflection, the semi-vowel is found there almost exclusively, the exceptions being mainly a few optatives, some class-signs (*nu*), and three imperatives (*sua*). All the formative parts of the verbs are therefore most conveniently treated here together. Moreover, it would be a waste of space to enumerate the vast number of cases in which the semivowel occurs. The whole subject is most clearly and comprehensively treated by giving a short résumé of all the instances in which the semivowels are found used, and a full statement only of the exceptional cases in which one of the vowels is found. The participial forms in -*ya* (-*ia*), -*enya* (-*enia*) etc., the infinitives in -*iai* (-*yai*), and the gerundives in -*tua* (-*tva*) have been considered in connection with the noun-formations; but the gerund, as having a less distinct noun-character, will be treated here.

The form *ya* is found (exclusive, of course, of all cases in which it is preceded by a vowel):

As a class-sign (4th or *div*-class), 375 times (*ásyati*, *línayati*; *ishyate*, *páthyate*; *ásyat*, *ishyat*; *mānyamāna*, *yúdhya-māna*, etc.), aside from some participles in composition; as sign of the passive, 225 times (*ajyáite*, *idhyáite*, *ucyáite*, *ajyamāna*, *pratyamāna*, etc.), aside from a few participles in composition; in denominatives, 279 times (*avasyát*, *irasyáti*, *kṛpasyáti*, etc.), aside from a few participles in composition; in intensives (which of this formation are of rare occurrence in the *Rig-*

Veda) 20 times (*carcūryāmāna* 1, *marmṛjyāte* 2, *marmṛjyānte* 5, *marmṛjyāmāna* 10, *verijyāte* 1, *rerihyāte* 1, to which Delbrück also counts, as it seems without sufficient reason, *irajyāsi*, etc.); as a tense-sign (in the future), 38 times (*karishyāti*, *bharishyāti*, *dharayishyāti*; *ksheshiāt*-, *sarishyāt*-, etc.); as a mode-sign (for the optative), 258 times (*acyām*, *syā't*, *bibhryāt*, *anajyāt*, etc.); as a gerund, *-yā* (*ya*) 75 times, and *-tyā* 13 times.

The exceptional occurrences of *-ia* are as follows:

- a. As a class-sign (4th conjugation) in *dsiat* 3 (iv.30.20; x.72.8; 138.4?), *r'jiantas* (vi.37.2,3).
- b. As a tense-sign: *ksheshiāntas* (fut. part; ii.4.3).
- c. In optatives: *aciā'm* 1 (*-yām* 11), *aciā'ma* 1 (*-yā'ma* 6), *aciāma* 1 (*-yāma* 8); *siā'm* 2 (*syā'm* 2, *syām* 5), *siā's* 1 (*syā's* 5), *siā't* 5, *siāt* 2 (*syāt* 7), *siātam* 2, *siā'ma* 10 (*syā'ma* 8), *siāma* 62 (*syāma* 24), *siūs* 1 (*syūs* 2), *sius* 1 (*syus* 4); *rāhiā'ma* 1 (*-yā'ma* 3); *gamiā's* 1 (*-yā's* 6), *jagamiātam* 1; *vidiā't* 1 (*yā't* 1), *vidiātam* 1; *vartīām* 1 (*-yām* 8), *vartīus* 1 (*-yus* 2).

The form *-v(a, etc.)* is found (exclusive of cases in which it is preceded by a vowel):

In a class-sign (*nv, v*) about 220 times (*kravānti*, *hinvānti*, *ṣṛvānti*, *cinvāt*; *tanvānti*, *ranvāt*; *jūhvāna*, etc.), aside from a few participles in composition; in personal terminations (*-vahe*, *-vahi*, *-sva*, *-dhve*, *dhvai*, *-dhvam*, *-dhva*) nearly 700 times (somewhat over 500 of which belong to the imperative in *-sra*); in gerunds 65 times (*-tvā* 21, *-tvī* 35, *-tvāya* 9, 8 of which in book X).

The exceptional occurrences of the vowel *u* are as follows:

- a. In a class-sign (*nu, u*): *ṣṛṇuāntu* 1, *ṣṛṇuantu* 1; *sunuānti* 1, *dhānuānā* 1; *tanuāt* 2.
- b. In a personal ending: *mītsua* 1, *matsua* 4; *vaṅsua* 1, *varttsua* 3; *hārshasua* 1; *amugdhuam* 1; *vartdhuam* 1.
- c. In the following forms of the root *dhanv* (which seems to be an extension of *dhav*; or in which *nr* is perhaps only an anomalous class-sign): *dhanuan* 1, *dhanuanti* 1, *dhanuāti* 1, *dhanua* 1, *dhanua* 7, *dhanuanti* 3.

C. OCCURRENCE OF *i* OR *y* AND *u* OR *v* IN THE ROOT-ELEMENT (REAL OR APPARENT) OF THE WORD.

In the very considerable number of words which come under consideration here, the semivowels *y* and *v* are found so regularly that an enumeration of all the exceptional cases only is needed. They will be considered under the various categories of words in question (radicals, their derivatives, and words of uncertain formation).

-y- OR -i-

- a. In verb-roots and their derivatives:

The semivowel *y* occurs in all verb-roots (*khyā*, *cyu*, *jyā*, etc.) without exception; and it is found in the radical part of all their numerous derivatives likewise, with only the following entirely sporadic exceptions:

From the root *jyā* we have *paramajīā'* (viii.1.30; *-yā'* 1), *jīā'yas* 3 (iii.38.5; vi.30.4; x.50.5; *jyā'yas* 9), *jīśthā* 21 (*jyēśthā* 16). From *dyut* we have *diśtanās* (viii.29.2), *sudīśmānam* (ii.4.1: Grassmann *sudyōtmānam*).

These exceptions may be valuable in helping to prove the deriv-

ation of *jyâ* from *ji*, and the connection of *dyut* with *div* (compare the form *diu-*), and also, perhaps, with *di*, 'shine.'

b. In pronominals:

tiâ 27 (*tyâ* 120), *siâ* 2 (*syâ* 54). The concurrent forms in *-ia* seem to prove that *tya, sya* were derived from *ta* and *sa* on the same principle that nouns with the suffix *-ya* were derived from others with the theme in *-a*.

c. In more uncertain combinations:

jidâ, 'bow-string,' 3 (*jyâ* 2; comp. Curtius, 639); *jidâdâ* 1 (from the preceding); *jiók* 14 (*jyók* 1? Comp. Kuhn, Zeitschr. xi.3, who derives it from *div, dyó* and *ac*); (from *div* 'heaven') *diâ'n* 1, *diâus* 28, *diâ'm* 11; *sionâ* 10 (fr. *siv, syu* †), and its compounds *sionaktâ* 1, *sionactâ* 2.

-v- OR -u-

a. In verb-roots and their derivatives:

The semivowel occurs in all the verb-roots (*tvaksh, çvac, svaj, vish*, etc.) with only one doubtful exception (compare also *dhanv*, p. 86), and in all their derivatives without exception.

The only verb-root in which the vowel occurs is *suad* (only once, or, according to Grassmann, twice, as against 17 *svad* and several derivatives from this). The form *suad* would seem to lend support to the theory that the root itself is a compound of *su-ad* (compare Pott and others); but, aside from the weighty objections brought against the prefix-theory generally by Curtius (Gr. Etymol., p. 34, etc.), the authenticity of the form *suad* is, at least, very doubtful. Its first occurrence is at ii.1.14 in a jagatî-pâda; but there it seems better to vocalize *v* in *tvayî* (as is done in other passages). Its second occurrence (*suâdanti*) is in Vâlahkilya 2.5 in a brhati-pâda. There, undoubtedly, the metre, as it stands, cannot be made out fully without vocalizing *v*; but the preceding hymn (v. 5), having a very analogous phrase [both *yîm te svadhâvant svâd(ay)anti*], uses *svadiyanti* for *suâdanti*; and the authority of an apocryphal Vâlahkilya-hymn is too weak to establish the genuineness of this one exception.

b. In pronominals:

kûa 32 (*krâ* twice, doubtfully: see Grassmann);—*tua* 'many,' 5 (*tva* 10);—*tuâ*, *tvâ*, 'thou,' both of very frequent occurrence, counting by several hundreds, but *tuâ* prevailing; found: in derivatives and compounds the two forms are also found interchanged (*v* 31 times, *u* 52 times);—*suâ* 42 (*svâ* 88, and in all derivatives and compounds).

All these forms, when compared with those of the verb-roots, point to an earlier formation by means of the suffix *-u*.

c. In more uncertain combinations:

tuâshtr 3 (but *tvâshtr* 60); *duâ* 3 (compounds: *duâ'daçx* 4, *duâ'daçâra* 1; *dvâ* 9, and in many compounds *dva-, dvî-*: comp. Curtius, 277);—*svâr* 120 (compounds and derivatives: *svargâ* 1, *svarcakshas* 1, *svarcanas* 1, *svarjit* 4, *svarjesha* 1, *svarpara* 12, *svarnr* 2, *svardr* 13, *svarpati* 3, *svarbhinu* 2, *svarmâdha* 6, *svarvâd* 27, *svarshâ* 11, *svarshâti* 6; *svârâna* 1, *svaryû* 1, *svarvat* 21). The vowel *u*, found throughout in *svâr* and its compounds points to another derivation than that proposed by Curtius (from the only doubtfully authenticated *svar*, 'shine'). The accent, of course, is connected with the preservation of the vowel.

GENERAL SUMMARY.

A brief summary of the number of occurrences before dissimilar vowels of *i*, *u* or *y*, *v* is as follows:

	<i>i</i>	<i>y</i>
Final of independent words, -----	almost exclusively	wholly sporadically
“ in composition, -----	194	29
“ in noun-stems, -----	409	295
“ in verb-roots, -----	51	165
In derivative suffixes (comp's excluded),	1937	1862
In declensional endings, -----	128	about 4800
In verb-inflection, -----	97	about 1300
In roots and root-elements, -----	127	much more numerous.
	<i>u</i>	<i>v</i>
Final of independent words, -----	almost exclusively	wholly sporadically
“ in composition, -----	359	23
“ in noun-stems, -----	285	241
“ in verb-roots, -----	never	very rare
In derivative suffixes (comp's excluded),	35	about 2400
In verb-inflection, -----	32	985
In roots and root-elements (aside from <i>tra</i>),	324	more numerous.

This summary shows clearly an inverted relation between the vowels and semivowels in regard to their occurrence, namely so that the vowels greatly prevail when finals in independent words, composition, and noun-stems, and the semivowels in other combinations. This relation becomes still more striking, if the considerable number of vowels in the root-element of a few words (as in *tu-a*, *su-ar*, etc.) really be, what seems very probable, originally nothing but finals of an independent word. It should be noticed also that the inverted relation is in some instances brought out still more clearly by counting single words instead of the number of their occurrences.

This natural relation between the vowels and the semivowels, combined with those clearly assignable causes for a vast majority of all discrepancies which have been pointed out throughout the article, confirms our introductory assertion that the varied use of vowel or semivowel in the Rig-Veda, as required by its metre, is owing, in the main, not to corruption or arbitrary usage, but to organic growth; that the great and perplexing variety is not lawless, but the natural result of a transition, apparently from vowel to semivowel, taken in the very midst of its progress.

ARTICLE IV.

NOTICES OF FU-SANG,
AND OTHER COUNTRIES LYING EAST OF CHINA,
GIVEN IN THE ANTIQUARIAN RESEARCHES
OF MA TWAN-LIN.

BY S. WELLS WILLIAMS,
PROFESSOR IN YALE COLLEGE.

Presented to the Society October 25th, 1880.

THE origin of the various nations and tribes inhabiting the American Continent is a question that has attracted the attention of antiquarians ever since the discovery of the continent four centuries ago. The general designation of "Indians," given by Columbus to the people whom he met, shows the notion then entertained of their Asiatic origin, not less than his ignorance of their true position. Since that time, numerous antiquarians have given us their ideas and researches upon this obscure subject. Some have combined many scattered facts so as to uphold their crude fancies; while others have formed a theory, and then hunted over the continent for facts to prove it. When their various works are brought together, comparison only shows how little which can lead to a definite conclusion has yet been really ascertained. The digest of the most careful of these travelers, and the candid analysis of the works of antiquarians and philologists, given by H. H. Bancroft in the fifth volume of his laborious work on the Native Races of the Pacific States (pp. 1-136), fully upholds his concluding sentence as to the present state of this question: "To all whose investigations are a search for truth, darkness covers the origin of the American peoples and their primitive history, save

for a few centuries preceding the Conquest. The darkness is lighted up here and there by dim rays of conjecture, which only become fixed lights of facts in the eyes of antiquarians whose lively imaginations enable them to see best in the dark, and whose researches are but a sifting out of supports to a preconceived opinion."

Since the publication of this work, in 1875, attention has been again directed to a hypothesis as to the origin of the native races—namely, that America was peopled from China—by the issue of Mr. C. G. Leland's book entitled *Fusang*, or the *Discovery of America by Chinese Buddhist Priests in the Fifth Century*. Mr. Bancroft had already collected the leading data upon this particular point (volume v., pp. 34–51), and Mr. Leland adduces no new facts. He brings together in a convenient form what he has collected from De Guignes, Neumann, and d'Eichthal in favor of his theory; while he analyzes and criticises the remarks of Klaproth, Sampson, and Bretschneider against it.

I have thought that a translation of the sections describing the lands lying to the east of China found in the work of Ma Twan-lin would tend to place his notice of *Fu-sang* in its true light, and help us to guess where that country should be looked for. This distinguished Chinese author belonged to a literary family, and spent his life in collecting and arranging the materials for his great work, the *Wăn Hien Tung Kao* (文獻通考) or *Antiquarian Researches*, which was published about the year 1321, by the Mongol emperor Jin-tsung, a nephew of Kublai Khan. Ma Twan-lin's life was passed amid the troublous times of the conquests of the Mongols, and his father held a high office at the court of the emperors of the Sung dynasty at Hangchow. He was busily engaged with these labors during the whole period of the residence of Marco Polo in China (1275 to 1295), and their deaths probably occurred about the year 1325.

The *Antiquarian Researches* now contains 348 chapters (*küen*), arranged without any natural sequence, under twenty-five different heads, as Chronology, Classics, Religion, Dynasties, etc. The last title is called *Sz' I Kao* (四裔考) or *Researches into the Four Frontiers*. In it are gathered together in twenty-four chapters all the information that the author could collect respecting foreign kingdoms and peoples. He himself seems never to have traveled outside of his own land; and during the ruthless wars of the Mongols he was probably glad to escape all molestation by staying quietly at his home at Po-yang, in Kiangsi province. The eight volumes containing these notices of other countries must consequently be regarded only as the carefully written notes of a retired scholar,

who was unable to test their value or accuracy by any standard, either of his own personal observation, or of the criticisms of those among his acquaintances who had gone abroad. The energy and skill of the great Khan, so unlike the effete and ignorant rule of the native monarchs at Hangchow, must have developed much mental and physical vigor among his subjects. An author like Ma Twan-lin would therefore be stimulated to gather all the information he could, no matter whence it came, to enrich his work. His design was more like that of Hackluyt or Purchas than that of Rollin or La Harpe; and in carrying it out he has done a good service for the literature of his native land.

In his survey of lands beyond the Middle Kingdom, he commences on the east and goes around to the south and west, describing each country without much reference to those near it. Having no data for ascertaining their distances, size, or relative importance, he makes no distinction between islands, peninsulas, and continents; for of all such things his countrymen are even now just beginning to learn. When he died, the political boundaries and names of the divisions in the vast empire of Kublai, who died at least thirty years before, had already begun to change; and this source of error could not well be analyzed or corrected by him. These conditions must be borne in mind, when estimating his notices of countries lying outside of China.

The twenty-four chapters in the *Sz' I Kao* comprise 250 titles in all, but this does not mean so many kingdoms. There are twenty-five located on the east, seventy-three on the south, and twenty-four on the west; and after these come brief accounts of seventy-eight regions still further west, even to Constantinople, which is regarded as a separate kingdom. The last eight chapters notice fifty more regions on the extreme north. An idea of the difficulties Ma labored under in preparing these accounts may perhaps be obtained by imagining the trouble an Arabian antiquarian, writing in the year 1800, and ignorant of European languages, would find in compiling a history of Germany for the ten previous centuries.

His plan of grouping them by their bearings from China helps us a little when looking for them; and as my present purpose is only to give what he says of those situated eastward beyond sea, this paper is narrowed down to nine sections. Of these, Japan is the longest, and is the seventh in the series. Between it and *Hia-i*, eight countries are mentioned, which are all now known to have been on the mainland. Thirty pages are devoted to *Wo Kwoh* (倭國) or Japan; though it is placed in the series out of its proper order, between *Fu-yu* (夫餘) and *Kao-kü-li* (高句麗), kingdoms lying within

the basin of the Songari river in the present Manchuria. The sixteenth in the list is *Hia-i*, or Yezo. It comes next to *Poh-hai* (渤海), a region identified with the maritime part of the recently acquired Russian possessions east of the river Usuri.

SECT. XVI.—*HIA-I* (蝦夷), THE LAND OF THE SHRIMP OR CRAB BARBARIANS OR FOREIGNERS.

Hia-i is the name of an island in the sea; it is a small kingdom. Its chiefs have beards more than four feet long. The people are very skillful with their bows and javelins; they stick the arrows in their heads (or hair). They will compel people to hold the arrows, and then, standing off many tens of paces, will hit the arrows without ever missing. In the autumn of the year A. D. 660, envoys came from this kingdom in attendance upon those from Japan.

The mention of the long beards of these foreigners identifies them with the Ainos, who still dwell in Yezo. Professor A. F. Bickmore* regards them as the relics of an early Aryan race, which gradually emigrated eastward in prehistoric times, or were driven by more powerful races further and further eastward till they reached the Pacific Ocean. Others, with more probability, and more advantage of examination and comparison, look upon them as the aboriginal inhabitants of the Japan islands, and hold that the present Japanese are the offspring of a mixture between the Ainos and a southern race, which invaded the group before the Christian era.

The word *Ainos* is derived, according to one Japanese explanation, from the early Chinese pronunciation of 倭奴, meaning the 'bondmen of the Japanese.' Another account is that it is changed from *inu* 'a dog'; a third explains it by the phrase *ai-no-ko*, or 'offspring of the middle,' i. e. a breed between man and beast. The last two are given by Griffis, and they all go to prove the antiquity of this peculiar people. The slight notice of Ma Twan-lin shows that the Chinese knew almost nothing of them, and regarded them as entirely uncivilized. A Japanese description of the whole island, dated A. D. 1786, indicates that the Ainos then formed only a part of the population of Yezo; and Klaproth criticises the mistakes of European voyagers in relation to their diffusion along the islands on the Pacific coast. It is not at all unlikely that the envoy from Japan mentioned in this notice was sent to the great Emperor Kao-tsu of T'ang in A. D. 660, in consequence of the victory obtained about that time by the Chinese over the Koreans.

* American Journal of Science and Arts, vol. xlv., May, 1868. This carefully prepared paper contains most of the facts ascertained respecting them. See also Miss Bird's Unbeaten Tracks in Japan, vol. II.

SECT. XVII.—FU-SANG (扶桑), OR THE KINGDOM OF FUSANG.

In the first year of the reign Yung-yuen of the emperor Tung Hwān-hau of the Tsi dynasty (A. D. 499), a Shaman priest named Hwui-shin arrived at King-chau from the kingdom of Fusang. He related as follows: "Fu-sang lies east of the kingdom of Ta-han more than 20,000 *li*; it is also east of the Middle Kingdom. It produces many *fu-sang* trees, from which it derives its name. The leaves of the fu-sang resemble those of the *tung* tree. It sprouts forth like the bamboo, and the people eat the shoots. Its fruit resembles the pear, but is red; the bark is spun into cloth for dresses; and woven into brocade. The houses are made of planks. There are no walled cities with gates. The [people] use characters and writing, making paper from the bark of the *fu-sang*. There are no mailed soldiers, for they do not carry on war. The law of the land prescribes a southern and a northern prison. Criminals convicted of light crimes are put into the former, and those guilty of grievous offenses into the latter. Criminals when pardoned are let out of the southern prison; but those in the northern prison are not pardoned. Prisoners in the latter marry. Their boys become bondmen when eight years old, and the girls bondwomen when nine years old. Convicted criminals are not allowed to leave their prison while alive. If the sentence is a capital one, at the time they separate, they surround [the body] with ashes. When a nobleman (or an official) has been convicted of crime, the great assembly of the nation meets and places the criminal in a hollow (or pit); they set a feast with wine before him, and then take leave of him. For crimes of the first grade, the sentence involves only the person of the culprit; for the second, it reaches the children and grandchildren; while the third extends to the seventh generation.

The king of this country is termed *yueh-ki*; the highest rank of nobles is called *tui-lu*; the next little *tui-lu*; and the lowest *no-cha-sha*. When the king goes abroad, he is preceded and followed by drummers and trumpeters. The color of his robes varies with the years in the cycle containing the ten stems. It is azure in the first two years; red in the second two; yellow in the third; white in the fourth; and black in the last two years.

There are oxen with long horns, so long that they will hold things—the biggest as much as five pecks. Vehicles are drawn by oxen, horses, and deer; for the people of that land rear deer just as the Chinese rear cattle, and make cream of their milk. They have red pears, which will keep a year without spoiling; water-rushes and peaches are common. Iron is not found in the ground, though copper is; they do not prize gold or silver, and trade is conducted without rent, duty, or fixed prices.

In matters of marriage, it is the law that the [intending] son-in-law must erect a hut before the door of the girl's house, and must sprinkle and sweep the place morning and evening for a whole year. If she then does not like him, she bids him depart;

but if she is pleased with him, they are married. The bridal ceremonies are for the most part like those of China. A fast of seven days is observed for parents at their death, five for grandparents, and three days for brothers, sisters, uncles, and aunts. Images to represent their spirits are set up, before which they worship and pour out libations morning and evening; but they wear no mourning or fillets. The successor of the king does not attend personally to government affairs for the first three years.

In olden times they knew nothing of the Buddhist religion, but during the reign Ta-ming, of the Emperor Hiao Wu-ti of the Sung dynasty (A. D. 458), five beggar priests went there from Ki-pin. They traveled over the kingdom, everywhere making known the laws, canons, and images of that faith. Priests of regular ordination were set apart among the natives, and the customs of the country became reformed.

Ma Twan-lin makes no comment on this narrative, nor does he tell us whence Hwui-shin (慧深) got it; he did not feel obliged to discuss its veracity, or explain its obscurities. The first impression made upon one who reads it with the idea that Fu-sang lay somewhere on the American continent, is that it proves rather too much, judging by what we yet know of the nations and tribes who once dwelt there. I do not mean that the notices it gives of the houses, unwall'd cities, curious mode of judging prisoners, and mourning customs, could not have applied to the natives of Mexico or Peru; but it has not the air of the narrative of a man who had actually lived there. It is easy to reply that all traces of the people mentioned have been lost, so that our present ignorance of their early civilization proves nothing either way. Still this account reads more like the description of a land having many things in common with countries well-known to the speaker and his hearers, but whose few peculiarities were otherwise worth recording. The shaman Hwui-shin may have been one of the five priests who went to Fu-sang from *Ki-pin* only forty years before his arrival at Kingchau (荊州), the capital of the Tsi dynasty. *Ki-pin* is the Chinese name for *Cophène*, a region mentioned by the Buddhist traveler Fa-hien (Chap. v.) under that name, and by Strabo and Pliny as situated between Ghazni and Candahar, along the western slopes of the Suleiman Mts., in the upper valleys of the Helmond river. These priests had probably traveled far north of China in their missionary tour, as described by De Guignes and d'Eichthal (Leland, pp. 143, 144), and lived in Fu-sang until it had become familiar to them. I think that Ma Twan-lin inserts Hwui-shin's account next to that of Hia-i, from an idea that both kingdoms lay in the same direction. He seems to have found no accounts of a later date, and the long interval of seven centuries had furnished

nothing worth recording about a land so insignificant as *Fu-sang*. We can hardly imagine that such would have been the case with a country to be reached by a long sea voyage, one where stupendous mountains, great rivers, well-built cities or citadels, and people with black or dark red complexions; would each make a deep impression upon an Asiatic. It is just as likely that junks drifted across the Pacific Ocean in the sixth century as in the nineteenth; but *Hwui-shin* is as silent respecting the manner in which he returned from *Fu-sang*, as of the way he reached it. If the five priests had traveled towards *Okotsk*, and beyond the River *Anadyr*, till they reached *Behring's Straits*, and then slowly found their way down to warmer climes, this would naturally form part of the story. Silence on all these points makes one hesitate in coming to the conclusion that *Fu-sang* formed any part of America.

The internal evidences to be deduced from what is stated are still more opposed to that conclusion. In our present state of knowledge of the ancient American languages, so far as I can learn, it would be a vain search to look for any words among them suggesting the names of *yueh-ki* (乙 祚) for king; *tui-lu* (對 盧) for a high noble; *siao tui-lu* (小 對 盧) for a secondary grandee; and *no-cha-sha* (納 咄 沙) for those of the lowest rank. It is not possible, at this date, to be quite sure what sounds were intended by the priest, or by the historian, to be represented by these Chinese characters in transliterating the three foreign words; but those here given are the present sounds in the court dialect, and probably near their originals.

But the next statement, respecting the changes required every two years in the color of the king's dress, carries with it altogether too much likeness to Chinese ritualism to be overlooked. It needs a little explanation to be made clear. The sexagenary cycle used in Eastern Asia from remote times is made by repeating ten stems six times in connection with twelve branches repeated five times; the two characters united form the name of a year. The ten years containing the ten stems begin with the first year of the sixty. Consequently, the first and second years, the eleventh and twelfth, the twenty-first and twenty-second, and so on to the last decade, will contain the same two stems—*kiah yueh* (甲 乙) five times over; in these two years, the king's dress must be *tsing* (青) or azure color. In the next two, the third and fourth in each decade, the stems *ping ting* (丙 丁) require it to be *chih* (赤), red or carnation. In the next two the stems *wu-ki* (戊 己) require it to be *hwang* (黃), yellow; in the fourth binary combination, the stems *kang sin* (庚 辛) require it to be *peh* (白), white. Lastly, the two stems *jin kwei* (壬 癸), denoting the ninth and tenth years of each decade, close the series, and

then his robes are to be *heh* (黑), black. These five are the primitive colors of Chinese philosophy.

Nothing analogous to this custom has ever been recognized among the Aztec, Peruvian, or Maya people. The ten stems in these five couples indicate among the Chinese and Japanese the operation of the five elements, wood, fire, earth, metal, water, in their active and passive exhibitions; each one destroys its predecessor, and produces its successor, in a perpetual round of evolutionary forces. The mention of such an observance in *Fu-sang* seems to fix its location in Eastern Asia, where the sexagenary computation of time has long been known. It was a curious usage which would strike a priest familiar with the Chinese ritual.

The same may be said of the worship of ancestral manes and images, and of the three years' mourning by the new king. The efforts to explain the big horns of the oxen, the red pears which will keep a year, and the vehicles drawn by horses, have each their difficulties if applied to anything yet known of the nations of ancient America along the Pacific coast, but may be applied to northern Asia with some allowances. I think the red pears may denote persimmons, which are dried for winter use, and to this day form a common article for native ships' stores.

The identification of the tree *fu-sang*, on which the notice chiefly turns, is not yet complete. Klaproth refers it to the *Hibiscus rosa-sinensis*, but I agree with Dr. Bretschneider in making it to be the *Broussonetia papyrifera*, or paper mulberry, a common and useful tree in Northeastern Asia. The use asserted to be made of the bark in manufacturing paper and dresses does not apply to the *Hibiscus* nearly so well, though that plant also produces some textile fibers; as does also another large tree not yet entirely identified, belonging to the family Tiliaceæ or lindens. The further statement, too, that its shoots are eatable like those of the bamboo, is inapplicable to the agave of Mexico, as well as to the *Hibiscus*, the linden, or *Broussonetia*, none of which are endogenous. It is one of the inaccuracies of the description, and cannot be reconciled with either plant. The *maguëy* made from the agave is better fitted for threads and cloth than for making paper. The fruit or berry of the *Broussonetia* is reddish, indeed, but no one would liken it to a *li* (梨) or pear. If the agave is intended, as Mr. Leland urges, it is very probable that *Hwui-shin* would have said something about the intoxicating drink called *pulque*, obtained from the leaves, rather than have likened them to the *tung* (桐), as he has done. This last tree is either the *Eleococca* or *Pawlonia*, both well known in China and Japan; so that an omission to speak of the *pulque* becomes rather an evidence against the agave being the *fu-sang* tree.

The remark about the fibers being woven into brocade is also true of the *Broussonetia*. A beautiful fabric is made in Japan by weaving them with a woof of silk, but nothing of this sort could be made from the weak agave fibers. Moreover, the *Broussonetia* has not been found in Mexico, although Neumann thinks that it once existed there. His argument in this respect is worth quoting as an instance of the general quality of those adduced to prove that *Fu-sang* was in America: "We know that the flora of the northwestern part of America is closely allied to that of China, Japan, and other lands of Eastern Asia. We may also assume that the *fu-sang* tree was formerly found in America, and afterwards, through neglect, became extinct. . . . It is, however, much more probable that the traveler described a plant hitherto unknown to him, which supplies as many wants in Mexico as the original *fu-sang* is said to do in Eastern Asia—I mean the great American aloe, called by the Indians *maguey*. From the crushed leaves, even at the present day, a firm paper is prepared. Upon such paper the hieroglyphic manuscripts alluded to by the Buddhist missionary, and destroyed by the fanatic Spaniards, were written." —*Leland's Fusang*, page 37.

The word *kin* (錦) applied to the curious paper-silk brocade manufactured from the *fu-sang* bark, according to Ma Twan-lin's text, is also applied to embroidery and parti-colored textures. It is not so much the damask-like figure that is the essential point; but among the Chinese the *kin* always has a variety of colors. This seems to have attracted the attention of Hwui-shin, and the remarkable iridescence of some specimens of this Japanese mulberry silk still excites admiration. Professor Neumann says that in the year-books of Liang he found the reading to be *mien* (綿), 'floss'; but the textual character *kin* has more authority in its favor, and is found in the Yuen Kien Lui Han. He translates the sentence: "From the bark they prepare a sort of linen which they use for clothing, and a sort of ornamental stuff." The word *pu* (布), here rendered *linen*, is now confined to cotton fabrics, but the distinction aimed at in the two terms used seems to have been that of a plain fabric and a brocaded one, like the Japanese *nisiki*.

It may be added, lastly, that many fables have gathered around the tree and the country of *Fu-sang*, which increase the difficulty of their identification. For instance, the *Shih Chau Ki*, quoted in the native lexicon *Pei-wan Yin Fu*, says: "The *fu-sang* grows on a land in the *Pih Hai* or Azure Sea, where it is abundant; the leaves resemble the common mulberry (*sang* 桑), and it bears the same kind of berries (*shin* 楮); the trunk rises several thousand rods (*chang* 丈), and is

more than two thousand rods in girth. Two trunks grow from one root, and lean upon each other as they rise; whence it gets the name *fu-sang* (扶桑), i. e. supporting mulberry." The use of the technical word *shin* for the fruit of the *fu-sang* is a very strong argument for its being the Broussonetia, and shows that its affinity to the silk mulberry (*Morus*) had been noticed.

Since the publication of Mr. Leland's book, the Marquis d'Hervey de St.-Denys, who has succeeded Stanislas Julien in the Chinese Professorship at Paris, has contributed a paper in the Transactions of the Academy of Inscriptions and Belles Lettres for 1876, which contains some additional notices of *Fu-sang*. Among these is an extract translated from the *Liang Sz' Kung Ki* (梁四公紀) or Memoirs of Four Lords of the Liang Dynasty, which throws some light on the times in which Hwui-shin lived, and the circumstances attending his arrival at King-chau. The Marquis shows that it was just at the overthrow of the Tsi dynasty that the priest came as envoy from *Fu-sang*, and had to wait three years before the Emperor Wu-ti of the Liang dynasty could receive him. The section in *Ma Twan-lin* he justly regards as a copy of the official report made to his superiors by Yu Kieh, one of these four Lords, obtained from Hwui-shin, the envoy. It is quite unlike the usage in such cases that nothing is said in the official annals of the presents offered by him; these, if they had come from America, would have been different from anything before seen, and therefore likely to be recorded. Such a list, however, did not necessarily fall within *Ma's* purpose when describing *Fu-sang*. The Marquis notices some of the presents offered, which are spoken of in the Memoirs of the Four Lords, and also some popular notions of that day concerning *Fu-sang*. He identifies the envoy with the shaman Hwui-shin, and concludes, with reason, that he was one of the five priests who went in the year 458 from *Ki-pin*. I have no copy of the *Liang Sz' Kung Ki*, and therefore quote his translation:

"At the commencement of the year 502, an envoy from the kingdom of *Fu-sang* was introduced, and having offered different things from his country, the emperor ordered Yu Kieh to interrogate him on the manners and productions of *Fu-sang*, the history of the kingdom, its cities, rivers, mountains, etc., in conformity to the usage practiced at court, whenever a foreign envoy visited it. The envoy from *Fu-sang* wept, and replied with a respectful animation, says the Chinese text, such as an old man would exhibit when he found himself in his own country after a long absence. The presents which he offered consisted especially of three hundred pounds of yellow silk, produced by worms found on the *fu-sang*

tree, and of extraordinary strength. The censer of the emperor, made of solid gold, weighed fifty catties (between fifty and sixty pounds), and three threads of this silk held it up without breaking. Among the presents was also a kind of semi-transparent stone, carved in the form of a mirror, in which, when the sun's image was examined, the palace in the sun distinctly appeared.

"One day, while he was entertaining the Court about foreign countries, the magnate Yu Kieh began to speak thus:—'In the extreme east is *Fu-sang*. A kind of silkworm is found there which is seven feet long, and almost seven inches around. The color is golden. It takes a year to raise them. On the eighth day of the fifth moon, the worms spin a yellow silk which they stretch across the branches of the *fu-sang*, for they wind no cocoons. This native silk is very weak, but if it be boiled in the lye made from the ashes of *fu-sang* wood it will acquire such strength that four strands well twisted together are able to hold up thirty catties. The eggs of these silkworms are as big as swallows' eggs. Some of them were taken to Corea, but the voyage injured them, and when they hatched out they were ordinary silkworms. The king's palace is surrounded with walls of crystal. They begin to be clear before daylight, and become all at once invisible when an eclipse of the moon occurs.'

"The magnate Yu Kieh proceeded to say:—'About ten thousand *li* northwest of this region there is a kingdom of women; they have serpents for husbands. The serpents are venomous and live in holes, whilst their spouses dwell in houses and palaces. No books are seen in this kingdom, nor have the people any writing. They firmly believe in the power of certain sorceries. The worship of the gods imposes obligations which no one dares to violate. In the middle of the kingdom is an island of fire with a burning mountain, whose inhabitants eat hairy snakes to preserve themselves from the heat; rats live on the mountain, from whose fur an incombustible tissue is woven, which is cleaned by putting it into the fire instead of washing it. North of this kingdom of women there is a dark valley; and still farther north are some mountains covered with snow whose peaks reach to heaven. The sun never shines there, and the luminous dragon dwells in this valley. West of it is an intoxicating fountain whose waters have the taste of wine. In this region is likewise found a sea of varnish whose waves dye plumes and furs black; and another sea having the color of milk. The land surrounded by these wonders is of great extent and exceedingly fertile. One sees there dogs and horses of great stature, and even birds which produce human beings. The males born of them do not live; the females are carefully reared by their fathers, who carry them on their wings; as soon as they begin to walk they become mistresses of themselves. They are remarkably beautiful and very hospitable, but they die before the age of thirty. The hares of that land are as big as the horses elsewhere, having fur a foot long. The sables are like wolves for size, with black fur of extraordinary thickness.'

"The courtiers were greatly amused with these recitals, laughing and clapping their hands, while they assured the narrator that they had never heard better stories. One minister interrupted Yu Kieh by a bantering objection: 'If one can put any trust in the official reports collected in relation to this kingdom of women, it might be all simply inhabited by savages who are governed by a woman; there would then be no question respecting this matter of serpents acting as husbands. How would you then arrange this matter?'

"Yu Kieh answered pleasantly, that he had nothing more to say on that point; and then he went on from one strange story to another still more strange, in which one part truth was mixed with nine parts invention."

The whole paper from which this extract is taken does credit to its author's researches into this matter, however much we may differ from his inferences. On a previous page, he adduces further proof from two early Chinese authors, who mention Fu-sang. One of them is Kieh Yuen, who flourished about B. C. 300, and wrote the poem *Le Sao* or Dissipation of Sorrows, which has since become a classic among his countrymen. In it, the Marquis says, "he traveled in thought to the four quarters of the universe. On the north, he perceived the land of long days and long nights; on the south, the boundless ocean met his view; on the west he saw the sun set in a lake, perhaps the Tengiri-nor or the Caspian Sea. On the east, in spite of the vastness of the Pacific, and of the idea which would naturally present itself to his mind, as the sun rose from the abyss of waters, he beheld the far-off shores receive the beams of Aurora, and in a valley, on a land shaded by the *fu-sang* tree, he places the limits of the extreme east."

He also calls in another author to fortify the poet, namely, Tung Fang-soh, whose work, the *Shin-i King* (神異經) or Record of Strange Wonders, was extant in the Han dynasty, but was afterwards lost. That now bearing his name has been manipulated by subsequent authors, and Mr. Wylie regards it as a production of the fourth or fifth century, and "the marvelous occupies so large a portion, that it has never been received as true narrative." But the Marquis does not so regard it:—"The works of Tung Fang-soh, which treat of regions most remote from China, have undergone some slight alterations at the dictum of the Chinese literati, who inform us that the alterations which they suspect date back to the fourth century after Christ. Their criticism, far from diminishing for us its authority, becomes, on the contrary, a valuable testimony of its authenticity at that date. This is what it says: 'East of this Eastern Ocean is the country of Fu-sang. When one

lands on its shores, if he continue to travel on by land still further east ten thousand *li*, he will again come to a blue sea, vast, immense, and boundless.' I think that I hazard nothing in saying beforehand that it is impossible to apply these indications of Tung Fang-soh to any other country than America."

Fu-sang and *Pāng-lai* are still used among the Chinese for fairy land, and are referred to by the common people very much as the Garden of the Hesperides and Atlantis were among the ancient Greeks. In Hankow, when a shopkeeper wishes to praise the quality of his goods, he puts on his sign that they are from one or other of these lands. The latter is perhaps the more common of the two, for it has become associated with the conqueror Tsin Chi Hwangti, who sent an expedition, about B. C. 220, easterly to find it and two other islands, called *San Sien Shan* (三仙山), or Three Fairy Hills, where the genii live. *Pāng-lai* is now the name of a district in the province of Shantung (better known from the prefectural city Tāngchau, west of Chifu), which commemorates this expedition after the fairies. Nothing was more natural to people living along the Yellow River in the days of Kiuh Yuen and Tang Fang-soh, when Shantung was inhabited by wild tribes, than to regard all that little known region in the utmost East as the abode of whatever and whoever were wonderful. To quote such legends as corroborative history or travel needs the support of some authentic statement to begin with; and Hwui-shin would be as likely to connect his account with something his hearers would recognize as existing in that direction, as to make up a story. I do not infer that neither the Chinese nor Japanese of the sixth century had any knowledge of the American continent from other sources, for it was as easy then for vessels to drift across the Pacific, as they still do; but they could not drift back again, and when once landed anywhere between Alaska and Acapulco, the sailors were not likely to try a second voyage to reach their homes.

There is, furthermore, an unexplained point how the name of the tree *fu-sang* came to be applied to the kingdom *Fu-sang*. If the *Broussonetia* be the plant denoted, and everything confirms this deduction, one would have expected its identity or likeness to the *chu shu* (楮樹), its Chinese name, to have been mentioned. It is, however, quite as probable that the tree got its name from the country, for the manufacture of paper from its bark does not seem to have been known in the days of Kiuh Yuen.

Yu Kieh's pleasant account of *Fu-sang* and its silkworms tends rather to show that in his day it was a region which everyone could people with what he chose. The use of silk among the people on the Pacific coast was, according to H. H. Bancroft, mostly confined to the Mayas in Central America; it was by no

means a common product, and mostly used in combination with cotton. This reference by Yu Kieh, although so exaggerated, tends to show that Fu-sang was regarded as on the western side of the Pacific Ocean; and I am inclined to place it in Saghalien island.

De Guignes lays much stress on the alleged distance of Fu-sang from Ta-han, and ingeniously reduces the 20,000 *li*, or 7,000 miles, to an actual estimate of the road taken by Hwui-shin (Leland, page 128) to get there. In the introduction to his accounts of all these eastern countries in Chap. 324, Ma Twan lin places the Flowery Land in the center of the universe (天地之中); and then adds, "East of China lies Wo-kwoh, also called Japan; east of Wo-kwoh, further on, lies Fu-sang, about 30,000 *li* from China." These figures are much too hap-hazard to depend on in settling this point, and carry less weight than such internal evidence as we can analyze. If compared with other distances applied to those regions by this author, we soon find how valueless they all are. No one in the sixth century had any means of measuring long distances, or taking the bearings of places, so as to make even a rough guess as to their relative positions, if he had tried to make a map. For an illustration of this remark, see Dr. Bretschneider's article in Transactions of North China Branch of the Royal Asiatic Society, No. X, 1876, where he gives an example of Asiatic map-making in A. D. 1331 to show the divisions of the Mongol Empire. It looks like a checker-board.

The position of Fu-sang cannot therefore be yet settled from these notices; but we may, as the Marquis d'Hervey de St.-Denys hopefully remarks, yet see the day when the immense riches hidden and almost lost in Chinese books will be brought out, and something more definite on this head be discovered.

I have only two other quotations to add. One is the name *Fushi-koku*, i. e. the kingdom of Fu-sang, an unusual designation known to the Japanese themselves, of their own country or a part of it, and which would hardly have been applied to a land on the other side of the Pacific Ocean. The other is the mention found in the *Ying-hwan Chi Lioh*, or Geography of the World, by Sü Ki-yü, the late Governor of Fuhkien, who wrote it in 1848. In speaking of the troubles in Corea caused by the Mongol invasion, and the ravages of the Japanese corsairs along the Chinese coast during the Ming dynasty, he proceeds to say, "But as the rising grandeur of our present Imperial house began to diffuse itself afar, its quick intelligence perceived that it ought first to scatter [as it were] slips from the *fu-sang* tree in the Valley of Sunrise; and thereby those lands (Corea and Japan) were awed into submission for many years, and our eastern frontier remained quiet and pro-

tected; neither of these nations presumed to incroach on our possessions." The Valley of Sunrise, used in the *Shu King* or *Book of Records*, is regarded as a synonym of *Corea*, and the *fu-sang* tree is here connected with that land. A few sentences on, Gov. Sū quotes from another book called *Records of Ten Islands or Regions*: "In the sea towards the northeastern shores lie *Fu-sang*, *Pāng-kiu* and *Ying-chau*; their entire circuit is a thousand li." He then adds, "I think that the story about these Three Fairy Hills arose from the exaggerated descriptions of our own writers, who used them to deceive and mislead men; for really they were small islands contiguous to Japan and belonging to it. If their ships of that period went to them out in the ocean, why could not [our people?] find them if they had searched for them?" He then relates the quixotic expedition sent by *Tsin Chi Hwangti* under *Sū Fuh*, to find them, with several thousand men and women, none of whom ever returned. From this reference it may be concluded that Gov. Sū regarded *Fu-sang* and the other two to belong to the *Kurile* islands near *Yezo*. He had access to many works in his own literature, and took unwearied pains to get at the truth of what he was writing about, by asking intelligent foreigners who were able to tell him. Among these were *Rev. David Abeel* (whose aid he acknowledges), and *M. C. Morrison*, a son of *Rev. Dr. Morrison*, the missionary. His opinion deserves to be received as that of an intelligent scholar, though he knew nothing of the question started by *De Guignes*.

In reading the *Marquis's* translation of *Yu Kieh's* story, an English scholar can hardly fail to compare it with the *Voyage to Laputa*; for that land was placed not far from *Fu-sang* by its clever discoverer and historian. *Dean Swift*, like *Yu Kieh*, drew on his imagination for his facts. The numerous references in that *Voyage* to the people of *China*, their institutions, peculiarities, costumes, and manners, must have been derived or suggested to him by the writings of *Semedo*, *Martini*, *Mendez Pinto*, and other travelers in *Asia* before 1720, which were probably in *Sir William Temple's* library. But one would almost as soon think of quoting *Swift's* assertion in *Chap. iii.* of this *Voyage* regarding "the two lesser stars or satellites which revolve about *Mars*," as proof that *Prof. Asaph Hall's* discovery of 1876 had been already known in *Queen Anne's* reign, as to seriously undertake from these Chinese authors to prove that they knew the American continent by the name of *Fu-sang*.

SECT. XVIII.—*Nŭ Kwoh* (女國), OR KINGDOM OF WOMEN.

Concerning the Kingdom of Women the shaman *Hwui-shin* relates:—"It is a thousand li to the east of *Fu-sang*. The bearing

and manners of the people are very sedate and formal; their color is exceedingly clear and white; their bodies are hairy and the hair of the head trails on the ground. In the spring they emulously rush into the water and become pregnant; the children are born in the autumn. These female-men have no paps on their bosoms, but hair-roots grow on the back of their necks; a juice is found in the white ones. The children are suckled a hundred days, when they can walk; they are fully grown by the fourth year. Whenever they see a man they flee and hide from him in terror, for they are afraid of having husbands. They eat pickled greens, whose leaves are like wild celery; the odor is agreeable and the taste saltish."

In the year A. D. 508, in the reign of Wu-ti of the Liang dynasty, a man from Tsin-ngan was crossing the sea when he was caught in a storm and driven to a certain island. On going ashore he found it to be inhabited. The women were like those in China, but their speech was unintelligible. The men had human bodies, but their heads were those of dogs, and their voices resembled the barking of dogs. Their food was small pulse; their garments were like cotton. The walls of their houses were of adobie, round in shape, and the entrance like that to a den.

From this account following that of Fu-sang, we might conclude that Ma Twan-lin regarded Hwui-shin alone as his authority for both of them, as he is quoted at the beginning of each section. But the incident of A. D. 508 may have been taken from the History of the Liang Dynasty. The mention of Tsin-ngan (晉安), however, as the residence of the shipwrecked man who found the Nü Kwoh, shows how little dependence can be placed on the Buddhist priest's estimate of the distance or direction of either Fu-sang or Nü Kwoh from China. The only seaport of that day named Tsin-ngan was the present Pu-tien hien (蒲田縣), identical with the prefectural city of Hing-hwa, situated between Fuhchau and Tsüen-chau in the province of Fuhkien. This man was probably a fisherman bound for the Pescadore Islands, who was driven off by a storm through the Bashee Straits into the Pacific Ocean, among the islands east of the Philippines. I think the priest is not responsible for the sailor's story, as it is omitted in the Yuen Kien Lui Han, and only the first part given. The legend of the Nü Kwoh probably applies to two places. Sir John Maundevile* places his Lond of Amazoyne beside the Lond of Caldee where Abraham dwelt; but his Yle of Nacumera, where "alle the men and wōmen of that Yle have Houndes Hedes; and thei ben clept Cynocephali," might be looked for where the History of the Liang Dynasty puts them as well as anywhere else.

* *Maundevile's Voyage*, ed. by Halliwell, 1839, pp. 154, 197.

In his Book of *Marco Polo* (ed. 1871, vol. ii., pp. 338-340), Col. Yule has brought together notices of the various legends which have appeared from time to time in Eastern Asia of this fabled land of Females, to illustrate what the Venetian has reported in Chap. xxxi. about the "Two Islands called Male and Female." In his other admirably edited work, *Cathay and the Way Thither* (page 324), he alludes to the report of Marignolli, about A. D. 1330, of a kingdom in Sumatra ruled by women. The first part of Ma's notice, which is certainly ascribed to the Shaman, leads one to look northeasterly toward the Kurile Islands for people with so much hair; and suggests a comparison with the inhabitants of Alaska called Kuchin Indians, described in Bancroft's *Native Races*, vol. i., pp. 115, 147, sqq. But it would not be worth while to spend much time in looking for this fabled land, had not the idea got abroad that its location would aid in identifying *Fu-sang* with some part of America.

SECT. XIX.—WAN SHAN (文身), OR PICTURED BODIES.

During the Liang dynasty (A. D. 502-556), it was reported that about seven thousand *li* to the northeast of Japan there was a country whose inhabitants had marks on their bodies such as are on animals. They had three marks on their foreheads. Those whose marks were large and straight belonged to the honorable class, while the lower sort of people had small and crooked marks. It is a custom among this people to collect a great variety of things of a very poor sort to amuse themselves. Those who travel or peddle do not carry any provision with them. They have houses of various kinds, but no walled towns. The palace of the king is adorned with gold, silver, and jewels in a sumptuous manner. The buildings are surrounded with a moat over ten feet broad. When it is filled with quicksilver, and the rain is allowed to flow off from the quicksilver, the water is then regarded in the markets as a precious rarity.

It is not certain whether marking and painting the body, or tattooing is intended by this term *wān shān*; but as the Chinese have a technical term *king* 黥, used in this extract to denote the process, it proves that tattooing must be here intended. This practice is less common among the islanders in the North Pacific than in the South, where a warmer climate enables them to show off their pretty colors and figures. The courses and distances from Japan here given would land us in Alaska, but no weight can be attached to them in this quotation from the Liang Records.

The distinction of rank indicated by the different lines described in this extract is like that in force among the Eskimo

tribes near Icy Cape, as described by Armstrong: "At Point Barrow the women have on the chin a vertical line about half an inch broad in the center, extending from the lip, with a parallel but narrower one on either side of it, a little apart. Some had two vertical lines protruding from either angle of the mouth, which is a mark of their high position in the tribe" (Bancroft, vol. i., page 48). The practice of tattooing has been so common at various times among the Chinese, Japanese, and other inhabitants of Eastern Asia, that nothing can be inferred regarding the country here intended. The singular notice of filling the moat with quicksilver may be paralleled by Sz'ma Tsien's description of the wonderful subterranean tomb of the great conqueror Tsin Chi Hwangti (B. C. 270) in Shensi, wherein he tells us that "rivers, lakes, and seas were imitated by means of quicksilver caused to flow in constant circulation by mechanism."

SECT. XX.—TA HAN (大漢), OR GREAT CHINA.

It was reported, during the Liang dynasty, that this kingdom lay more than five thousand *li* east of Wăn Shăn. The inhabitants have no soldiers or weapons, and never carry on war. Their manners and customs are the same as those of the Wăn Shăn, but their speech differs.

In Chap. 231 of the *Yuen Kien Lui Han* (淵監類函), a valuable Cyclopedia compiled by orders of the Emperor Kanghi and issued in 1710, this section is quoted verbatim from the *Nan Shi* of Li Yen-shau, the same source from which Ma Twan-lin got it. Though that history contains the records of the Liang dynasty (A. D. 502-557), it was not written till about one century afterwards, in the Tang dynasty; and during that interval nothing more seems to have been learned about the lands of Fu-sang, Ta Han, or Nü Kwoh. Nor had Ma Twan-lin found anything in his day, six centuries afterwards, to add to what the shaman Hwui-shin reported; while this Cyclopedia, the product of a commission of learned men who ransacked the literature of China to find whatever was valuable and insert it, contains just the same story, hoary with the 1200 years' repose it had had in the *Nan Shi*. To show the carelessness of these compilers in their work, in Chap. 241 another kingdom is described under the name of Ta Han, but not a word is added to indicate how two kingdoms should have had the same name. This last is equally vague with the first in respect to its identification, and reads as follows:—

"The New Records of the Tang Dynasty say:—Ta Han borders on the north of *Kuh* (犍); it is rich in sheep and

horses. The men are tall and large, and this has given the name *Ta Han* (i. e. Great China) to their country. This kingdom and *Kuh* are both conterminous with *Kieh-kiah-sz'* (契克亞斯), and therefore they were never seen as guests [in our court]. But during the reigns Ching-kwan and Yung-hwui (A. D. 627 to 656) they presented sable skins and horses, and were received. It may be that they have come once since that time."

The compilers of the *Cyclopedia* abridged this extract somewhat, for they do not refer to Lake Baikal (貝加爾), where *Ta Han* joins the countries of the *Kieh-kiah-sz'* and *Kuh*, and thus help to identify it. The next section contains an extract of seven pages from the New Records of Tang about the *Kieh-kiah-sz'* or Hakas, whom Klaproth regards as the ancestors of the Kirghis now dwelling in Tomsk. If half of this account be true, the Hakas formed a powerful kingdom in the Tang dynasty, and their neighbors *Ta Han* and *Kuh* are to be looked for on the River Yenisei, or more probably between the Angara and Vitim rivers.

The effort of Prof. Neumann to identify the first-named *Ta Han* with Alaska, simply because he places Wăn Shăn among the Aleutian Islands, and *Ta Han* lies 5000 *li* east of it, is based alone on reported distances that are mere guesses. Mr. Leland also refers to De Guignes' opinion that *Ta Han* meant Kamchatka, and that Wăn Shăn was Yezo, and adds this comment:—"De Guignes determined with great intelligence that the country of the Wen-schin, 7000 *li* northwest of Japan, must be Jezo, from the exact agreement of the accounts given of that country by Chinese historians of the early part of the sixth century (Goei-chi and Ven-hien-tum-hao, A. D. 510-515) with that of Dutch navigators in 1643. Both describe the extraordinary appearance of the natives, and speak of the abundance of a peculiar mineral resembling quicksilver"—page 129. Mr. Leland has been misled in regard to this agreement by not knowing that these supposed historians are only the names of two books, viz: Records of the Wei Dynasty (A. D. 386 to 543), and the same Antiquarian Researches from which I have translated these six sections. He also assumes that Hwui-shin and his predecessors went by sea, adding that this was "no impossible thing at a time when in China both astronomy and navigation were sciences in a high sense of the word."

SECT. XXI.—CHŪ-JŪ KWŌH (倭儒國), OR LAND OF PYGMIES.

In the kingdom of Chū-jū the men are four feet high. Still farther south of it come the Black Teeth Kingdom, and the Naked Peoples' Land, distant from Japan over four thousand *li*. It re-

quires a year's sailing for a vessel to get to them. About ten thousand *li* to the southwest live islanders whose bodies are black and eyes white; they are naked and hideous; their flesh is delicate. If one of them is shot with an arrow when traveling, his body is eaten.

In Col. Yule's *Marco Polo*, it is stated (vol. ii., p. 358) that the number of islands in the Indian and Pacific oceans is estimated at 12,000 as a round number; and in his *Cathay*, he gives a European map of that region, dated 1375, in which the total is placed at 7,548. This particular figure was no doubt obtained from *Marco Polo's* larger number, though the process of derivation is not clear. One of the islands is specially marked Naked Savages; it lies off the Chinese coast, near where the Pescadore group is situated. Of these four islands, that of the last named probably refers to the Australians, if the distance from Japan is at all to be considered; but more probably the Dayaks of Borneo are meant. The Black Teeth Kingdom need not be sought after, for the prevalence of Malay tribes which blacken their teeth by chewing betel-nut, the usage no doubt referred to, makes it impossible to specify any particular nation. The Land of Pygmies probably denotes those parts of Celebes or Papua where the Negritos still form a portion of the population; they sometimes come to Singapore in the Bugis vessels from Celebes. Edward Lane speaks of the Arab legends respecting pygmies in this part of the world, and resolves them all into bad accounts of the apes so common in the Archipelago. It is more likely that the Arab legends had travestied the men into apes. The story quoted by Friar Oderic, in 1318, about the pygmies or Biduini, who lived on the banks of the Talay—"the greatest river that exists in the world"—in the western part of China, is illustrated by Col. Yule (*Cathay*, p. 121) with his usual research; but no one has heard of them since Oderic's day. In Pickering's *Races of Men* (Bohn's ed., pp. 175-180) the Negrillos or Negritos are described as still inhabiting many islands, or hiding themselves in the forests of the larger ones from other more powerful races of the Indian Archipelago.

SECT. XXII.—CHANG-JIN KWOH (長人國), OR THE KINGDOM OF GIANTS.

This land is situated to the east of Sin-lo. The inhabitants belong to the human race; their bodies are thirty feet high. They saw their teeth and make hooks of their nails; they have black hair on the body, and crouching bodies. They eat no food cooked by fire, but gnaw birds and beasts, or pounce on a man in

order to eat him. They get a wife for the purpose of preparing their clothes. Their country is contiguous to a range of mountains several thousand *li* in extent, in which there is a narrow pass or cañon secured firmly by a two-leaved iron gate called the Guard-gate. The people of Sin-lo constantly maintain a guard of several thousand bowmen and soldiers to defend it.

It will occur to the English reader that Dean Swift had probably met with some references to these Chinese notions of strange lands in his reading, and developed his descriptions of Lilliput and Brobdingnag from their hints. The Pacific Ocean in his day was a region of wonders, almost as much as in the time of Marco Polo and Ma Twan-lin. Sin-lo (信羅) is an old name for a kingdom in the eastern and southern part of Corea; and the Land of Giants must therefore be looked for in the islands of Quelpaert and Tsu-shima near by; or in some mountain fastness on the mainland. There is less to suppose about them, however, than their counterparts, the Pygmies; for not even a fossil fragment has yet been found of human beings who could overtop a giraffe or a dinornis.

A Japanese notice of them both, with other monsters, occurs in the *Kun Mo Dzu I* (訓蒙圖彙) or Pictures arranged in Classes to teach Children. I have introduced one of the drawings, which does credit to the native artist in his effort to convey some idea of their relative sizes. Respecting the giants the author says: "The *Chio-zhin* or Tall People are called *Sé-taka*. Some people during the Ming dynasty were driven out to sea by a tempest, and reached the land where these people lived. They are over fourteen feet high, and very skillful in swimming." The same book says of the Pygmies:—"Their country lies to the eastward. Their bodies are from twelve to eighteen inches high. In that region the storks eat these dwarfs, so that they always go in companies to protect themselves." As to the *Chu-jü* (侏儒) or Pygmies, this writer adds: "They are called *issun boshi*, i. e. inch elfins, for they measure only one inch; another name is *tan-shin* or short people." Besides the above, this work describes the *Chio-hi koku*, or the Land of Long-armed men, a small country in the Eastern sea. "The people have cotton clothes; their arms reach to the ground as they stand, and are seventeen feet long." Their counterparts, the Long-legged people, will run as fast as the wild beasts.

These lands are of course placed in remote regions, and most of them were first reached by sailors driven out of their reckoning, just as in English literature Lemuel Gulliver, Robinson Crusoe, and Peter Wilkins are each fabled to have reached the lands associated with their names after losing their



Japanese Pygmies and Giants.

ships. The family likeness which pervades these Asiatic stories about giants and pygmies seems to point to a common origin. This is particularly the case with the Japanese story of the pygmies, whose efforts to protect themselves from the storks will recall Homer's allusions to those who dwelt on the coasts of Oceanus, and were in constant danger of being snapped up by cranes. Pliny put them in Transgangetic India. The date of this Japanese work is, however, too recent to preclude the inference that the author may have heard of similar Occidental legends.

SECT. XXIII.—KINGDOM OF LIU-KIU (琉球), OR LEWCHEW.

The Lewchew kingdom is an island in the ocean. To the east of the prefecture of Tsuen-chau [in the province of Fuhkien] are the islands called Pang-hu, or Pescadores. They lie near together, so that the fire signals can be seen from each other. The trip occupies five days' sail. There are many caves in the hills.

The surname of the king is *K'uan-sz'*; his name is *Hio-lah-tau*; it is not known whence he came, but there have been many generations of the family. The people of that country call him *ko-lao-yang*, and his wife is *to-pah-tu*; the place where he lives is *Po-lo-tan tung*. The moat around it has three separate rows of palisades, one behind the other; it encircles it so as to let water flow in. Stockades, for defense, are made of spinous trees. The largest abode of the king has sixteen apartments; fine carvings are seen in them of beasts and birds, and also numerous jingling bells. A common kind of tree resembles the orange with thick foliage; the slender branches hang down like hair.

The kingdom has four or five generals who oversee all the districts; each district has a petty king. Wherever one goes there are villages, each of which has a headman, who wears an ornament like a bird, and is selected for his skill as a fighter. They all unite in setting out (or apart) trees, where the affairs of the village are managed. Both men and women bind their hair with white hempen cords, coiling it up from the nape of the neck quite to the forehead. The men make a cap out of birds' plumes, in which they interweave pearls and cowries, and further adorn with red feathers; the style of these head-dresses differs much.

The women make caps out of figured soft gauze and white cloth, square and upright in shape; they weave jingling bells in leather with all sorts of feathers, and thus form their garments. The shape and style of dresses differ much. They attach feathers to a string and hang on periwinkle shells for ornament, so that their colors shall be well contrasted. Small cowries are suspended from them which make a jingling sound like a chatelain; little cymbals also hang from the armlets, and strings of pearls around the neck. Hats are braided out of twining plants, and then adorned with plumes and feathers. They possess swords and scabbards, bows and arrows, rapiers, poniards, and other weapons. Iron is very scarce in the kingdom, so that their swords being thin and small, they employ much horn and bone to strengthen them. They plait hemp to make mail-armor, or else prepare the skins of bears and leopards for the purpose.

The king rides in a wooden car, shaped like an animal, borne on the shoulders of his guard and attended by a retinue of about ten men. The petty kings ride in a frame made like a loom, on which hang bells resembling animals. The inhabitants of the kingdom delight in fighting and pugilistic combats. The men are courageous and brave and very agile in running; they show contempt of death and much fortitude when wounded. The lords of the districts employ bands of retainers, but they never rescue or help each other. When two bands of warriors are pitted against each other, three or five men from each will rush out in front leaping and yelling, bandying words and mutual railings before they rush together and shoot their arrows. As soon as one side is worsted, the whole band scatters in flight; messengers are then dispatched to make an apology, and all parties enter into a peace before sep-

arating. If any of their number were killed in the fight, all come together and eat the bodies; it is the usage to put the skulls and bones around the king's palace; he confers [on those who slew them] a cap of honor, and they become leaders in the band.

There are no regular taxes collected; when any work is to be done there is a general levy of scutage to accomplish it. There is no well-settled or constant scale of punishments, but the whole community assembles to deliberate on and decide the cases after careful examination. Criminals are all sentenced by the bird-adorned headman [of the village]; but if there is an appeal, and his decision does not end it, then it is carried before the king. He orders his officers to assemble in general council upon the case and give their final verdict. The prisons have no cangues or keys, for the prisoners are simply bound with ropes. Capital punishment is inflicted with an iron needle, like a chopstick, ten or twelve inches long, which is thrust into the nape of the neck. Lighter crimes are punished by bamboozing.

There is no written character among the people. They keep their reckoning of time by noting the waning and waxing of the moon, and watch the flowering and fading of the trees and shrubs to learn the passage of the year.

The people have deep-sunken eyes and long noses, in which they resemble the Ouigours. They are not very quick-witted. There is no well-marked distinction between the high and low in official ranks, nor between the prince and his ministers, or in their acts of decorum when they meet. Father and son sleep in the same bed. Young men pull out the mustache and whiskers, and remove the hair from the body. Married women mark the hands with ink, like tattooing, making figures of snakes and insects. Marriages are performed with feasting and drinking; pearls and cowries form the betrothal presents. If a young man and woman like each other then they make a match. When a woman bears a child and suckles it, she is required to eat the placenta. After parturition she roasts herself before a fire in order to sweat off the humors; in five days she is quite well again and all right.

Sea-water is poured into large wooden troughs; it is then evaporated in the sun to procure salt. The sap of trees is used to make pickles. Samsbu is made by putting leaven into rice; its taste is very weak. In eating, the fingers only are used. If one comes across a rare delicacy he first goes and offers it to his overlord. In all their feasts and assemblies, when a person is about to drink he is required to call out his name before he drains the cup. If he is feasting with the king he first calls out the king's name, when they touch their goblets, something after the custom among the Toorks, and then drain them. In their songs they keep step as they cry out; one man sings and all the rest keep time with him; the notes are rather melancholy and exciting. They raise a girl up on their shoulders, and then, swinging the hands, will dance round and round as mummers do.

When the last hours of a sick person approach they lift him out

to the arbor in front of the house. The relatives and neighbors wail and weep and condole together. The body is washed, and then swathed and bound with cotton cloths, after which it is rolled up in matting, enveloped in earth, and then put in a coffin for burial. No tumulus is raised over it. When a son mourns for his father he eats no meat for several months. The usages among the natives in the southern districts are a little different; for there, when a man is dead, the villagers and townsfolk come together and eat the body.

Among the beasts are found bears, leopards, and wolves; pigs and poultry are very numerous, but horses, asses, sheep, goats, or oxen are quite unknown. The fields are fertile and moist. They are first burned over and then irrigated through sluices in which the water runs; the streams have one water-gate only. Stones are used for coulters; they are about fourteen inches long and several inches wide; ground is plowed with them. The crops are rice, sorghum, millet (*Milium*), spiked millet (*Setaria*), pulse, red and black and large beans, etc. The trees are maple, fir, bamboo, *lianos*, pine, elm, rottlera, laurel, and fruit trees. The medicines are like those found in our Middle Kingdom. The air and seasons resemble those south of the Nan-ling range of mountains.

The popular practice in worshipping the gods of the mountains and seas is to offer spirits and rich delicacies. To those who are killed in a battle or quarrel, the thing which killed them is offered as a sacrifice to their manes. Sometimes a small house is raised against a fine large tree; or the skeleton is hung in the tree and the people shoot arrows at it; or a tumulus of stones is raised over the body, to which is fastened a mourning banner, as the ancestral tablet. Where the king resides many skeletons and skulls are brought together beneath the wall screening the gateway so as to show its rank. In the vacant spaces above the gates and inner doors they hang the heads, bones, and horns of animals.

In the first year of the reign of Yang-ti of the Sui dynasty (A. D. 605), admiral Ho-man and others gave the following report:—"During the spring and autumn of each year, when the sky is clear and the breeze refreshing, if one looked eastward he saw something thin or vapory, like foggy smoke arising from a fire; one could not tell how many thousand *li* off it lay." The emperor ordered Chu Kwan, the master of the horse, to go to sea and search for this region and find out its customs. Taking Ho-man's words for his clue, and several of his people, they went off together and reached the kingdom of Lewchew. They could not understand the language spoken there, so they seized a man and returned. Next year the emperor bade Chu Kwan to soothe and re-assure the man; but he was obstinate and gathered his clothes and armor to go back. About that time a Japanese envoy came to court, and seeing the man, remarked: "This savage is one of the men employed in the kingdom of Sié-kiu." The emperor then ordered Chin Ling, general of the Tiger Braves, to lead a body of soldiers and cross from I-ngan (Swatow or Chao-chau fu) to the

island of Kao-wa (the Madjico-sima group?); from thence two days more took them to Yuen-pi (Kirrima islands?); and another day to Lewchew. The people there would not submit, and general Chin Ling attacked and routed them; he went on as far as the capital, where he burned the palace, and took captive several thousand men and women, whom he put amongst his troops with their goods, and returned. Since that time intercourse has been broken off.

In its neighborhood lies the kingdom of Pi-shé-yé, or Formosa, whose inhabitants speak an unknown language, go naked, and have such a stupid look that one can hardly imagine them to be human. About the year A. D. 1174, in the Sung dynasty, a chieftain from this land led several hundred of his wild followers to the towns of Shui-ngao, Wei-tao, and others in Tsien-chau prefecture [in Fuhkien], where they slew and captured many people. They highly prized iron things, spoons, and chopsticks. The inhabitants shut their doors and fled, but took their door-rings; and as they went, they threw away the spoons and chopsticks. The brigands stooped to pick them up, which constantly delayed their progress, so that our troops were able to catch and bind several. When they saw an armed horseman they would struggle to strip off his mail, and joining their heads would kill him. They used spears in fighting, and would tie a string to the weapon, a hundred feet long or more, so as to pull it back to them, so highly did they prize the iron, and could not bear to throw it away. They used no boats or oars, but sailed about on bamboo rafts; these could be piled up on each other like screens; if an emergency arose, the whole company would lift them up, set them afloat, and thus escape.

This account probably confounds the inhabitants of Lewchew and Formosa in several particulars, yet it possesses historical interest as one of the earliest references to those islands. The details bear internal evidences of being the actual observations of travelers, who had remained there long enough to learn about the people and furnish some account of them. In this respect it is far more satisfactory than the priest Hwui-shin's report about Fu-sang. The names given to the countries near Lewchew of Kao-wa (高華), Yuen-pi (鼉鼉), and Pi-shé-yé (毗舍耶), which I have identified as the Madjico-sima group, Kirrima Islands, and Formosa, must be received with some hesitation, as I have no means of verifying them; and their resemblance in sound to any actual localities cannot now be expected.

Ma Twan-lin names no authorities for this notice of the Lewchewans; but as the allusion to the descent of a band of rovers from Formosa, in 1174, during the reign of the emperor Hiao-tsung, speaks of an event which took place only about seventy-five years before his own birth, there is reason for concluding

that the section was made up from documents and books compiled during the reign of Li-tsung, under whom his father held high office. The names he gives to the king and queen of Lewchew and his residence, as *Kwan-sz* (歡斯) and *Ho-lah-tau* (渴刺兜), *Ko-lao-yang* (可老羊) and *To-pah-tu* (多拔茶), with *Po-lo-tan tung* (波羅檀洞) for the capital, cannot, at this interval, be at all recognized from any books to which I have access.

In concluding these extracts from Ma Twan-lin's writings, I need hardly draw attention to the vagueness which marks them, when we look for any definite information. His long chapter on Japan bears more marks of well digested information than any of those which are here given, and indicates constant intercourse between it and China. Mr. Leland quotes from several authors whatever will elucidate and uphold his theory respecting *Fu-sang*, and deserves thanks for his research in this interesting question. He has, however, been led astray by a similarity, or an error, in spelling to confound Kamchatka with Lewchew, in the following extract, made up from Steller, a German writer of 1734: "Lieu-kuei (Loo-choo) or Hing-goci, as the Kamchatdales of the present day term their fellow countrymen dwelling on the Penshinish Bay, is situated, according to the Chinese Year Books, 15,000 Chinese miles distant from the capital, which, according to the measurement of the celebrated astronomer Ihan, in the time of Tang, gives about 338 to one of our grades—the Chinese grades being rather smaller than our geographical. Now Si-gan, the capital of China during the dynasty of Tang, lies in the district Schensi, lat. $34^{\circ} 15' 34''$ N. and long. $106^{\circ} 34'$ E. from Paris. Petropaulowski (Peter and Paul's Haven), on the contrary, according to Preuss, lies lat. $53^{\circ} 0' 59''$ N. and long. $153^{\circ} 19' 56''$ E. from Paris. These are differences which the accounts of the Chinese Year Books establish in an astonishing manner, and leave no doubt whatever as to the identity of Kamchatka with Lieu-kuei; for it is certainly satisfactory, if estimates of such great distances, drawn in all probability from the accounts of half-savage sailors, or quite savage natives, should agree within two or three grades with accurate astronomic results."—*Fusang*, page 15.

It is impossible and needless to analyze this *mélange*, for it has nothing to do with *Fu-sang* or its locality; but it led me to add this translation of Ma Twan-lin's section on Lewchew. Mr. Leland has a note in which he says, "it is evidently borrowed from the *Tang-schu*, but is much better arranged, and contains some original incidents, on which account I have freely availed myself of it." I have no means of verifying this statement, and therefore am unable to say how far Ma quoted from the History of the Tang, and also to explain whether Kam-

chatka was ever called Lieu-kuei, and what the Chinese characters for this name are;—or whether Lieu-kuei is a misprint for Liu-kiu or Lewchew. The name of this insular kingdom has been written a dozen ways by foreigners; it is called Riu-kiu by the Japanese, Doo-choo by the inhabitants, Low-kow by the Cantonese, and Lewchew by the Ningpo people; but it could never have been confounded with Kamchatka by either of them.

Since Commodore Perry's visit in 1853 and 1854, and the residence of missionaries at Napa, these islanders have become better known; and the halo cast around them by Basil Hall and Lieut. Clifford, in their narratives of the visit of the frigate *Alceste* in 1816, has been dissipated. They began to have official intercourse with China in 1373, when Zai-to, the king of Chung-shan, sent an envoy to the Emperor Hungwu at Nanking, who five years before had expelled the Mongols. In 1609, they came under the control of the prince of Satzuma; but during the interval of 236 years they became well acquainted with Chinese literature and usages, retaining their own spoken dialect of the Japanese. The kingdom has latterly, with all the dependent islands, been incorporated into the Japanese empire, under the name of Okinawa ken, and the royal family recently removed to Tokio.

There are several points in this notice of Lewchew which tally with what is now seen among the people. The manufacture of salt from sea-water is largely carried on, as the traveler can see on landing at Napa or Pu-tsung, where the salt vats employ many workmen. The custom of married women staining their hands with a dye, so as to resemble tattooing, is still observed. When I visited Napa, in 1837, the islanders had not seen Europeans for twenty years, and those on board the ship *Morrison* were strange to most of them. Among the party which landed one evening for a stroll, were Mr. and Mrs. C. W. King. We were surrounded by an eager crowd as soon as we stepped ashore, and took our way towards a hamlet not far off. Seeing a woman standing by herself near a door, Mrs. King went alone towards her, and held out a hand in token of friendliness, while the rest of us looked on until the interview had disclosed her feelings. The woman presently came forward and showed Mrs. King the blue mark on the back of her hand to indicate that she was married; but her amazement at seeing Mrs. King begin to pull off a glove to show her that she was not thus marked was a study to the rest of us, for the woman thought it was a second skin.

ARTICLE V.

INDRA IN THE RIG-VEDA.

BY EDWARD DELAVAN PERRY,

TUTOR IN GREEK AND SANSKRIT IN COLUMBIA COLLEGE, NEW YORK.

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THE primary object of this essay is to give as distinct an account as possible of the great god Indra, as he appears in the light shed upon him by the Rig-Veda; more especially to determine with accuracy his position in the Vedic pantheon, and his original significance (his *Naturbedeutung*): i. e. the powers of nature which lie behind and are symbolized by this striking personification. The preliminary part of all such work must of course be a searching examination of the hymns themselves, and a conscientious interpretation of all passages in any way bearing upon the subject. Great care has been taken to avoid two dangers: on the one hand, that of overhasty combination and comparison with seeming parallels in extra-Indian mythology; and on the other, that of following too closely what may be called the ritualistic tendency, which puts these ancient hymns (which in the main breathe out the freshness of nature, and display the Indian people in the vigor of youth) on the same level with the religious monstrosities of a cunning, subtle, ingenious and yet frivolous priesthood of a later age, and attempts to explain obscure points in the text by not less imperfectly understood details of the later ceremonial. To the first of these perils L. Myriantheus seems to have fallen a prey; his work, *Die Ävins oder Arischen Dioskuren*, was published at Munich in 1876. The other has often proved disastrous to Alfred Hillebrandt, who is represented in this field by two books, *Ueber die Göttin Aditi* (Breslau, 1876), and *Varuna und Mitra* (1877).

The Rig-Veda is the only source from which materials have been drawn. The Brāhmaṇas show so decided an advance beyond Vedic ideas that great confusion would inevitably have accompanied any attempt to combine them. The same reason prevailed with regard to the Yajus. As for the Sāman, it contains only sixty or seventy verses not found in the Rik, and these offer nothing whatever of value; while a preliminary examination of the Atharvan showed that the results to be obtained from it would not differ materially from those furnished by the Rik, for which reason its discussion may well be postponed.

The essay is divided into four parts, as follows: I. The primitive conceptions of the Indians regarding Indra, and the powers of nature which are represented under this personification; II. The accounts of Indra's parentage, and the narratives and legends of his birth; III. The functions of Indra in the supernatural and natural, the moral and the physical world, and his relations with other gods; IV. The conception of Indra as a definite person, and the resulting description of him.

I. *Indra's Significance in Nature.*

For many years, from the pioneer labors of Roth in the field of Vedic exegesis to the latest researches of Ludwig and Bergaigne, most Sanskrit specialists and comparative mythologists have viewed Indra as a god of the sky—whether, on the one hand, of the radiant and sunny, or, on the other, of the rainy sky. For the first at all complete exposition of the subject we have to thank Roth, who in an essay in Zeller's *Theologisches Jahrbuch* for 1846 (p. 352) styles Indra "the first of the gods, born before the other immortals, whom he has adorned with power; the god of the bright clear vault of Heaven. His cheerful yet majestic appearance makes him the protector of human beings and the dispenser of riches." A note adds: "*Indra* signifies 'the radiant one;' from the root *idh*, *indh*, 'kindle;' related to *αἶδω*, *αἰδῶ*, in which the root is strengthened." The next year Roth modified his views as follows (*Zeitsch. d. D. Morg. Ges.*, 1847, p. 72): "Indra is the supreme god of the Vedic belief, or at least the one whose rule and power most immediately concerns the life of mankind. He is the god of the cheerful sky of day, which after all obscurations again shines forth, and upon which depend fruitfulness of the earth and the quiet enjoyment of human existence." Roth's later views, as expressed in the Petersburg Dictionary, we shall find essentially different. Lassen (*Indische Alterthumskunde*, 2nd edit., i. 893) takes in the main

this view, but adopts a different derivation of the name. Wuttke (*Geschichte des Heidenthums*, 1852, ii. 241), deviating widely from all previous opinions, and completely failing to grasp the conceptions of Indra offered by the older literature, saw him only in the light of the later Brahmanic descriptions. Benfey (*Orient und Occident*, 1862, p. 48 ff.) regarded Indra as god of the rain-sky. He says: "It can be proved conclusively that Indra stepped into the place of the sky-god, who in the Vedas is addressed in the vocative as *dyaush pitar*." But, so far as I know, this has not yet been proved. Benfey's derivation of the name *indra* is, as will be seen below, utterly untenable. Max Müller says in his *Lectures on the Science of Language* (ii. 470): "The real representative of Jupiter in the Vedas is not Dyu but Indra, a name of Indian growth, and unknown in any other independent branch of Aryan language. Indra was another conception of the bright blue sky." And, on page 473, note 35: "Indra, a name peculiar to India, admits of but one etymology: i. e. it must be derived from the same root, whatever that may be, which in Sanskrit yielded *indu*, 'drop, sap.' It meant originally the giver of rain, the Jupiter Pluvius, a deity more often present to the mind of the worshipper than any other. Cf. Benfey, *Or. u. Occ.*, i. 49." But in his *Chips* (ii. 91) the same scholar calls him "the chief solar deity of India"! The identity of Indra with Jupiter Pluvius is also maintained by Muir, *Sanskrit Texts*, v. 77. Grassmann (*Wbch. zum R. V.*, s. v. *indra*) calls him the god of the bright firmament. Myriantheus (*Die Äcvinis*, p. xvi.), whose account of Indra is chiefly remarkable for calm assurance of statement, again identifies him with Dyu; while Ludwig (*Die philosophischen und religiösen Anschauungen des Veda*, p. 33) characterizes him thus: "It is very difficult to determine Indra's precise mythological nature, since he unites in himself the characteristics of several older divinities. It is perhaps most correct to style him the god of the sky, under whose protection and guidance stand on the one hand the sun and stars—hence his friendship with Pūṣan and Viṣṇu—on the other the phenomena of the thunderstorm." Again, (R. V. Transl., iii. 313): "Dyaus is described similarly with Indra, who is doubtless a mere resuscitation of the older god who had been for a time thrust into the background by the rise of the Varuṇa-cult, and whose identity with Zeus was long ago recognized." (See also p. 318 of the same volume.) Bergaigne, in his work entitled *La Religion Védique d'après les hymnes du Rig-Véda* (Paris, 1878, p. xvi.), pays no attention whatever to the nature-side of the god's personality, but views merely his ethical side. He calls him the god of battle, and says of him: "He is more profoundly distinguished from the

elements than are the other gods." Undoubtedly this is true, that Indra is a god of battle; but it is only half the truth; nor is he in fact more sharply distinguished from natural phenomena than several other divinities.

Differing from all these opinions, I consider that Indra belongs not among the deities of the sky, but among, or rather at the head of, those of the air—a distinction which we shall find a very important one when Indian mythology is in question. Without doubt, the strongest reason for the classification of Indra among the sky-gods has been his apparent identity with the Greek Zeus and the Italian Juppiter. And if the thunderstorm-mythus had in its development run like courses in India and in Greece and Italy, we could not avoid accepting this identification as correct. It is perfectly true that Indra has to wage the same contest as Zeus; and it is not less probable that in the yet undivided Indo-European mythology Dyu was the one to whose lot it fell to conquer the cloud-demons. Accordingly we must say, Indra had taken the place of Dyu. But the conclusion is unwarranted, that Indra was by nature a deity of the sky. We may merely say: the original functions of Dyu, a deity of the sky, as conqueror of the cloud-demons, were transferred by the Indians to another god, of different origin and different nature, who in the course of time had advanced into prominence by the side of Dyu. And this transfer is moreover in perfect accord with Vedic doctrines respecting the structure of the world. Before explaining these doctrines, however, I will endeavor to show what natural phenomenon Indra originally represented.

That he is really in the Veda the god—i. e. the personification—of the thunderstorm, is shown very plainly by several passages which are in fact detailed descriptions of that mighty convulsion of nature, and yet place the god, conceived of as a person, most prominently in the foreground. In the Veda we have to deal with a worship of nature, whose chief gods were long ago recognized as originally personifications of different powers of nature. We are therefore entitled, in this as in most other cases, to seek the most primitive conceptions which the Indians formed of their favorite god in those passages in which the descriptions of some phenomenon of nature, and of a personal being supposed to underlie the manifestations of this phenomenon, are most evidently and most intimately united. A number of such verses, relating especially to Indra, are treated of in Part II.; but I will introduce several of the most striking here, that we may in advance gather an idea of the true nature of this god. Thus, i. 55. 4:¹ "He manifests

¹ *sá íd váne namasyúbhír vacasyate oáru jáneṣu prabruvāpá indriyám.*

himself in the forest by the bending trees, announcing his power (which is) held dear among men ;" v. 32. 10 :¹ "Before him bends the godlike tree ;" i. 55. 1 : "Dreadful, mighty, the cause of woe unto men, he whets his thunderbolt ;" i. 54. 1 :² "Thou, O Indra, smiting the woods asunder, didst make the streams to gush out ; did not then mortals huddle together in terror ?" Is this the god of the blue sky ? Zeus is the sky-god and the sky ; Indra is not the sky—he wins it for his worshippers. ii. 12. 13 : "Before him Heaven and Earth bow, at his breath the mountains quake ;" vi. 31. 2 :³ "Through dread of thee, Indra, everything upon the earth trembles, yea even the immovable regions of the air ; Heaven and Earth, the mountains, the forests—everything that is firm trembles at thy progress ;" vi. 18. 2 :⁴ "Raising the dust on high, he alone was the mighty shaker of the nations of men ;" x. 92. 8 :⁵ "Even the sun reins in his tawny mares ; every one dreads Indra, for he is the mightier, and (fears) the blast from the body of the terrible giant ; day after day he thunders, victorious, unrestrainable." In i. 52. 8, Indra is styled *candrā-budhna* : i. e. 'having a white, or bright, ground.' This could be taken as descriptive of the sky, but suits better the thunder-cloud, as it advances across the bright heavens ; we have only to translate 'with bright background.'

But even when we have proved that Indra was the thunder-storm, we are not yet justified in denying him a place among the sky-gods ; in fact, with our minds full of Greek mythology, we should consider such a denial absurd. But let us see what views the Vedic poets held concerning the scene of action of the thunder-storm, and consequently of the thunder-god.

From the earliest Vedic times, the Indians marked off the universe in their imaginations in a manner peculiar to themselves. They assumed three separate regions : viz. of the earth, the air, and the sky ; a conception which to my knowledge is not found elsewhere among Indo-European mythologies.⁶ Moreover, many natural phenomena which in still

¹ ny āsmāi devī svādhītir jīhita.

² ākrandayo nadyō rōruvad vānā kathā nā kṣopīr bhiyāsā sām ārata.

³ tvād bhiyendra pārthivāni vīqṡācyutā cic cyāvayante rājāṅai : dyāvākṡmā pārvatāso vānāni vīqṡam dṛṡhām bhayate ājmann ā te.

⁴ bṛhādreṇuṡ cyāvano mānuṡpām ēkaḥ kṛṡṡnām abhavat sahāvā.

⁵ sūraṡ cid ā harīto asya rīramad indrād ā kāṡ cid bhayate tāvīyasah : bhīmāsyā vīṡṡo jathārād abhiqṡāso divē-dive sāhūrī stann ābādhitaḥ.

⁶ The Greek *ἀῖθήρ* and *ἀήρ* seem not to correspond accurately to the Indian *dyāus* and *antarikṡam*. Nor did the Greeks distribute their divinities so formally among the different regions. Their scheme was : divinities of sky, earth (and sea), and lower world.

earlier, ante-Vedic times they themselves imagined, and other Indo-Europeans continued to imagine in later times, as occurring in the sky, were by them transferred to the middle region, the district of the air, a region which in the Veda we find always sharply distinguished from the sky. This change from primitive conceptions must have been consummated at a very early date in the interval between the separation of the Indian tribes from the others of Aryan stock and the composition of the Vedic hymns, since we find in all parts of the Rig-Veda the three regions accurately and consistently kept apart, and yet they are mentioned in such a manner as to make it almost certain that the idea of the *antarikṣam*, the Air-region, was of later development than those of Heaven and Earth. For instance, in numerous passages Heaven and Earth are styled the universal parents, a name never applied to Heaven and Air, or Earth and Air. In i. 56. 5 we read: "When thou, O Indra, didst fasten firmly the region of air in the frame of Heaven and Earth;" ii. 15. 2: "he filled out the two worlds (i. e. Heaven and Earth, *rodasī* having always this meaning) and the air." Most plainly speaks iv. 42. 4: "The triple universe."

Parallel with this development of a specifically Indian triple division of the universe, of a third and new realm of nature, runs the development of a specifically Indian divinity, the field of whose activity is this new realm, and whose function it is to fight in mid-air the battles which the Aryan imagined as taking place in the sky. From what germ was developed the conception of this mighty deity Indra we shall never learn from the Veda, for therein he appears always as either the greatest, or among the greatest, of the gods. The occurrence of the word *iṇdra* or *aṇdra* in Zend, as name of an evil spirit, and the Slav. *jědrŭ*, 'swift' (see below), perhaps point to his existence, in a very rudimentary form, in the mythology of the period preceding the separation. Other than these there seem to be no indications of him whatever, outside of the Indian peninsula.

For the Indian of the Vedic period, the sky was raised far above all strife; there was eternal light, eternal peace, the eternal waters, and there dwelt the bright Ādityas, in inviolable sanctity and majesty; but the air, the middle region, was alive with malicious spirits, whose power had to be broken by a god of greater power than they, by Indra. Yet to overcome the demons, Indra does not descend from Heaven into Air, for

¹ *vī yāt tīró dharúṇam ácyutam rájō 'tīṣṭhīpo divá ātāsu barhāṇā.*

² *ā ródasī apṛṇad antárīkṣam.*

³ *tridhātu bhūma.*

he is supposed to be there already. He advances along the horizon, between Heaven and Earth, as the poets never weary of singing; he is born there, as child of Heaven and Earth, which he forces asunder by his huge size and power (see x. 89). He is the god of battle, of the battle fought in the thunder-storm between good and bad spirits; and the battle-ground is the air, the home and gathering place of all demons.

Another proof that Indra was not thought a god of the sky is found in the references made to him in Yāska's Nirukta, where Yāska quotes the opinion of his predecessors that in reality there were but three gods: Sūrya (the sun) in the sky, Indra or Vāyu in the air, and Agni upon earth. Yāska however maintains the plurality of divinities in each region, and places Indra (or Vāyu) at the head of those of the air. Significant is likewise the close connection of Indra with Vāyu and the Maruts, the wind- and storm-gods, whom it is impossible to view as celestial divinities.

For all these reasons, and for others which will be advanced in their proper place, I conclude that Roth's views as laid down in the Pet. Dict., s. v. *indra*, are correct. There we read: "*Indra*. Name of the well-known god, who in the Vedic creed stands at the head of the gods of the middle region, the atmosphere. The most prominent manifestation of his power is the battle which he has to fight with the thunder-bolt (*vajra*), in the thunder storm, against the demoniac powers. In his origin he is not the supreme, but the national and favorite god of the Indo-Aryan tribes, a type of heroic power used for noble ends; and with the gradual fading away of Varuṇa he advances more and more into prominence." My own investigations, so far as they reach, have all tended to confirm these views of my revered master.

In the present state of our knowledge of the Veda, perhaps as much is lost as is gained by the zeal for comparison between things Indian and things extra-Indian. The Sanskrit texts must be conscientiously worked through many times yet before we can speak with confidence upon all the religious conceptions and beliefs of those ancient *ṛshis*: and the light which so many have attempted to throw upon them from without often distorts instead of revealing the real truth.

The etymology of the word *indra* has been very variously explained. Yāska gives no less than thirteen different derivations, and the number of modern attempted ones must be nearly as great. The Indian derivations are as usual absurd, yet hardly more so than the following by Benfey: *syand-ant*, pres. pple. of a supposed base *syand*; with loss of *-t*, *syand-an*; with change of *-n* to *-r*, *syand-ar*; with addition of *-a*, *syand-ar-a*; then *sind-ar-a*, *sind-r-a*, *ind-r-a*. Middletown out of Moses,

or mango out of Jeremiah King, are nothing to this. The most reasonable derivation is still that proposed by Roth, *Pet. Dict.*, s. v.: viz. from the root *in* or *inv*, 'press, urge, have power over,' etc., with the suffix *-ra* (used to form *nomina agentis*), a euphonic *d* being inserted, as in the Greek *ἀνδ-ρῶς*, *μεσημ-β-ρία*, etc. The signification of 'the stormer, the oppressor' suits the character of the god to a remarkable degree; and Ludwig mentions as the only instance of the word in extra-Indian language (except perhaps Zend *īndra* or *añdra*) the Slav. *jedru*, 'swift, impetuous.' So too the Aṣvins, the mighty horsemen, are called *indrataṃā*, heretofore commonly rendered 'most like Indra,' for which 'most impetuous' would surely be better; and in vii. 99. 3 Ushas, the Dawn, is likewise styled *indrataṃā*, where 'most like Indra' is eminently unsatisfactory. Better would be perhaps in this passage also the rendering 'very swift.'

II. *Indra's Origin.*

The Vedic poets did not content themselves with a mere personification of the thunder-storm and its at once salutary and destructive effects. On the contrary, they on the one hand gradually extended and multiplied the fields of Indra's activity in nature, and developed his original character, until they came to imagine him as interfering in all human affairs, and even as guiding the courses of the stars and bringing order and stability into the movements of the universe; while on the other hand they humanized his divine person, to a greater extent perhaps than any other of the Vedic pantheon, attributed to it a human form, and furnished it with a variety of human attributes, all of which however harmonized perfectly with the original conception which underlay this divine nature. Finally, they represented Indra as begotten by other gods, and as entering at his birth into an already existing world of divinities.

The numerous passages of the Rig-Veda which make mention of Indra's descent and birth will be best divided into four groups. In the first I shall include verses containing such conceptions as are still purely physical: that is, conceptions in which the original content of the mythus, the immediate impression received in the observation of nature, is most prominent, even in the details; in the second group, the anthropomorphic statements—those in which Indra's *Naturbedeutung* sinks into comparative insignificance beside his humanized person, and in which his birth is described as happening in accordance with human experience and circumstances; in the third, passages which, although containing references to Indra's par-

ents, yet do not name or characterize them more definitely ; and in the fourth group, such conceptions of his origin as proceed from later speculation, and are in fact nothing but mental abstractions from the chief manifestations of his activity.

It was not in accordance with the character of the Vedic people, which in fact was somewhat lacking in mythological versatility, fully to develop the genealogical side of the Indra-mythus. This lack of mythological versatility, as for want of a better term I have chosen to designate it, contrasts most sharply with the mental cast of other Indo-European peoples, especially the Greeks. Parents of Indra are indeed alluded to often enough, but rather *en passant*, and generally without mention of specific names. I have not found any passage in the Rig-Veda according to which any other divinity than Dyū is by name styled Indra's father, while on the other hand the allusions to his mother are widely various. At one time it seems to be Prthivī, the Earth, at another the Rain-cloud, finally purely abstract personifications are called his progenitors. Of the view, advanced from different sources, that Indra is to be considered as son of Aditi, I shall have occasion to treat further on.

I now proceed to the discussion of the pertinent passages.

1. *Physical conceptions.*—In the following verses, the birth of Indra is plainly observed to be merely a mythical figure for the sudden breaking out of the thunder-storm, which advances along the horizon, on the edge of Heaven and Earth, "in the lap of the parents;" and in which the God's nature manifests itself. Hardly is the deity born before the mighty battle of the thunderstorm, involving Heaven and Earth in confusion, begins to rage.

First of all belong here three verses of the 17th hymn of Book iv. Thus, v. 4: "Thy father is considered to be the mighty Heaven; the progenitor of Indra was an excellent workman, in that he begat the noisy wielder of the stout thunderbolt, who is immovable as is the earth from its seat;" v. 2: "In terror at thy vehemence the heaven trembled, in terror at thy fury the earth trembled, at thy birth; the firm mountains tottered, the plains crumbled, the waters dispersed;" v. 12: "Little cares Indra for his mother, little for his father, for the

¹ *suvirā te janitā manyata dyāuḥ indrasya kartā svāpastamo bhūt: yā im jājana svaryāṁ suvājram ānapacyutaṁ sādaso nā bhūma.*

² *tāva tviṣṭo jānīman rejeta dyāuḥ réjad bhūmīr bhīyāsa svāsya manyōh: rghāyānta subhvaṇ pārvatāsa ārdan dhānvāni sarāyanta āpaḥ.*

³ *kīyat svid indro ādhy eti mātūḥ kīyat pitūr janitūr yō jājana: yō aya cūṣman muhukārī fyarti vāto nā jūtāḥ stanāyadbhīr abhrāḥ.*

begetter that begat him: (Indra) who in a moment gives free rein to his violence, as it were a storm-wind amid thundering clouds." In other words, the verse says: Indra pitilessly drags Heaven and Earth, in whose embrace he was born, into the whirlpool of the raging thunder-storm. A similar thought seems to have hovered in the mind of the author of the not very intelligible passage iv. 22. 4.¹ I understand the verse thus: "Every hillside and the many heights, the heaven and the earth, trembled before the gigantic one at his birth; when the courageous one brings his parents to the cow (i. e. to the thunder-cloud), then do the winds bellow mightily round about." The second half of the stanza seems to mean: when Indra hurries Heaven and Earth into the thickest turmoil of the thunder-storm, then etc. Here also, then, I can perceive only a description of the advancing storm, spreading swiftly over earth and sky; and so in i. 63. 1; but particularly viii. 59. 4: "(No one equals Indra,) the unconquered, the mighty one victorious in battle, at whose birth the great cows (i. e. the clouds), wandering in the wide domain (the sky), all bellowed together—yea, even heaven and earth bellowed together."

In each of these passages the reference to the approach of the storm is unmistakable. In others the description is more detailed. Here is one of a thunder-storm in the mountains at daybreak: viii. 6. 28-30:² "On the slope of the mountains and at the junction of the streams, the wise one was born through devotion (i. e. the storm was sent in answer to the prayers of the rain-seeking worshippers); viewing the sea of air, he looks down from this height, from whence, quivering he rages; then first does one see the light of morning, sprung from the ancient seed, as it flashes out along the sky." Similarly i. 6. 3: "Giving light unto darkness, and shape unto the shapeless (i. e. illumining the darkness of the night or the gray of the morning with lightning-flashes) thou wast born together with the dawns."

A good parallel to this conception of a storm at daybreak is found in several passages which relate the violent treatment of Uṣas, the Dawn, by Indra, who shatters her car and drives her in terror from it; but the treatment of them here would

¹ *vīṣvā ródhāṁsi pravātaṣ ca pūrvīr dyāūr ṛṣvāj jānīman rejata kṣāl ā mātārā bhārati ṣuṣmy ā gōr nṛvāt pārijman nonuvanta vātāḥ.*

² *āṣāḥam ugrām pṛtanāsu sāśahīm yāsmīn mahīr urujrāyaḥ: sām dhāvō jāyamāne anonavur dyāvāḥ kṣāmo anonavuh.*

³ *upahvaré giriṇām saṁgathé ca nadīnām: dhīyā viprō ajāyata. āta samudrām udvātaṣ cikītvān āva paṇyati: yāto vipānā ejati. ād it prānāsyā rétaso jyōtiṣ paṇyanti vāsarām: parō yād idhyāte divā.*

disturb the continuity of the discussion of Indra's birth and origin. I reserve them therefore until later, and proceed at once to the second group of passages, to the

2. *Anthropomorphic Conceptions*.—Scenes and events of human life, often boldly hyperbolical—often, too, humorously conceived—mingle themselves with the myth of Indra's birth.

The first place here belongs by right to the remarkable and certainly very ancient hymn, no. 18 in the 4th Book, with the discussion of which that of the other passages will easily and naturally connect itself. Roth, in the *Siebenzig Lieder des Rig-Veda* of Geldner and Kaegi, has attempted to divide this hymn into its component parts. From his treatment there result the following fragments: I. Indra, refusing to enter the world in the usual way, declares his intention of bursting through his mother's side: iv. 18. 1: "This is the old and well-known path by which all the gods were born; by it shalt thou likewise be born when mature; thou mayest not, by other means, bring thy mother unto death." (Indra speaks.) v. 2: "I will not go out thence, that is a dangerous way; right through the side will I burst; many things yet undone have I to do, to fight with this one, to be at friendship with that one." v. 3 (Roth, 13): "He beholds his mother dying: 'I will not yield, no, I will go through there;' Indra drank in Tvastar's house the Soma, of hundred-fold value, from the vessel of juice." v. 4 (Roth, 3): "How should that one, whom his mother carried for a thousand months and for many years, undertake evil? Nowhere exists his equal, among the living or those that shall be born." II. Indra, as a weakling, is exposed by his mother, according to v. 8 even thrown into the river Kuṣavā, but is saved and attains power and victory. Thus, v. 5 (Roth, 4): "Thinking Indra of no account, his mother hid him (Indra), who teemed with heroic strength; thereat he stood forth, wrapping about him his own garment, and though new-born, filled both worlds." And v. 8 (Roth, 7): "Now the young mother throws thee aside, and now Kuṣavā swallows thee; and now the waters take pity upon the child, and now Indra stands forth in his might." III. The new-born Indra displays forthwith his courage and strength: v. 10 (Roth, 9): "The young heifer brought forth a stout calf, an unconquerable, a brawny bull—Indra; she licks her calf,¹ that it may walk, but it seeks of itself its own way." v. 11 (Roth, 10): "The mother is concerned about the young hero: 'My son, the gods abandon thee!' And Indra, about to kill Vrtra, spake: 'Friend Viṣṇu, stand further away.'" IV. Indra kills his own father. Thus, v. 12 (Roth, 11): "Who is it

¹ Roth reads *āreṭ tīm* for *āriṭham*.

that has widowed thy mother? Who sought to smite thee when lying down, when running? What god was there that pitied thee? Since thou didst seize thy father by the foot and dash him in pieces." Verses 6, 7, 9, and 13 have nothing to do with Indra's birth.

It is not possible to discover any intimate connection between all the verses of this hymn. The Anukramanī, or list of hymns with authors, subjects, and metre, styles it a dialogue between Indra, the sage Vāmadeva, and Āditi. From this source doubtless Sāyana derived his explanation (which Hillebrandt, *Āditi*, p. 43, has adopted from him), that the first two verses refer to the birth of Vāmadeva, who in order to excuse his extraordinary whim recalls Indra's deeds of violence. Roth's translation and arrangement remove every doubt of the fragmentary and heterogeneous character of the hymn.

According to iii. 48. 2, 3, and vii. 98. 3, Indra at the moment of his birth invigorates himself with a draught of Soma. A curious feature of the Indra-mythus is found twice in Book viii. Thus, in viii. 45. 4, 5: "The slayer of Vṛtra, as soon as he was born, seized his arrow; he asked of his mother, 'Who are the mighty ones? What are they called?' Then Çavasī answered thee: 'He shall as it were fight with his forehead against a mountain, whoever desires to do battle with thee.'" And viii. 66. 1, 2: "As soon as he was born, the possessor of hundred-fold might asked of his mother, etc. Then Çavasī named to him Ārṇavābha and Ahicūva: 'My child, these will be for thee unconquerable.'" While in the first passage Indra's mother puts implicit faith in her son's prowess, in the second she does not credit him with such courage and power as he afterward displays; but, as the following verse shows, her fears for him are ungrounded: "All these together the slayer of Vṛtra smote, as one beats spokes into the hub with a hammer; when full-grown, he became the slayer of the Dasyus.

Thus must we explain the episode, if we follow the authority of the *pada*-text for *niṣṭurah*: i. e. = *nis* + *turas*. But Aufrecht, differing from the *pada* and the Pet. Dict., explains *niṣṭurah* as from *ni* + *√star*, i. e. 'those that are to be cast down;' and he translates: "My child, do thou cast these to earth" (Z. D. M. G., xxiv. 205). Grassmann follows Aufrecht;

¹ ā bundām vṛtrahā dade jātāḥ pṛchad vī mātāram: ká ugrāḥ ké ha ṛṇvire. prāti tvā çavasī vadad girāv āpsa ná yodhiṣat: yás te çatrutvām ācaké.

² jajñāno nú çatākratur vī pṛchad iti mātāram: ká ugrāḥ ké ha ṛṇvire. ād im çavasy ābravid ārṇavābhām ahiçūvam: té putra santu niṣṭurāḥ.

³ sām ít tām vṛtrahākhidat khé arāḥ iva khédayā: právyddho dasyu-hābhavat.

Ludwig translates "(O child, they must be mighty ones," by which the line becomes extremely weak and insignificant. If Aufrecht's view be correct (and the imper. *santu* certainly makes for him), there is no contradiction, but a close correspondence, between the two hymns. Compare again iv. 18. 11, where Indra does not fear, though the other gods have abandoned him, but entreats Viṣṇu to leave him free scope.

A very human addition to the fable is the following, where the poet imagines the infant god surrounded by attendant women: x. 153. 1: "Busy women sat about the new-born Indra, rocking him, and instilling into him excellent strength." In another passage, incorrectly incorporated in the Urvaḡi-hymn, Indra's nurses are the celestial waters, in whose midst, in fact, according to the observation of nature, the god is born: x. 95. 7: "The divine women sat about the new-born one, and the exulting streams nursed him; when, O Loud-shouter (Indra), the gods nourished thee for mighty battle, and for the destruction of the demons." The sudden change from the third person to the second, the person described being addressed, is not uncommon in the Veda.

3. *Vague Statements concerning Indra's Parents.*—The third group comprises passages in which Indra's parents are indeed alluded to, but not by name, and without any special characterization. Thus, x. 28. 6: "Many thousands do I cast to earth at once, for my father created me as an irresistible one" (cf. i. 129. 11); vii. 20. 5: "A giant begat the giant for battle, a heroine bore the hero;" x. 134. 1: "When thou, O Indra, like the dawn, didst fill both worlds, a divine mother had borne thee, the great ruler of great nations, a noble mother had borne thee."

A curious reference to Indra's childhood, for which I have not been able to find any satisfactory explanation (if indeed any deeper meaning underlies the text), is the following: viii. 58. 15: "While yet an immature boy, he mounted the new wagon, and roasted for father and mother a fierce bull." Probably we have here only a fanciful description of the headstrong and mighty infant.

Further indistinct references to Indra's mother are the

¹ *īnkhāyantīr apasyūva indram jātām ūpāsate: bhejānāsaḥ suvīryam.*

² *sām asmiñ jāyamāna āsata gnā utēm avardhan nadyāḥ svāgūrtāḥ: mahé yāt tvā purūravo rāpāyāvardhayan dasyuhātyāya devāḥ.*

³ *purū sahasrā nī ciṣāmi sākām aṣatrūḥ hí mā jānitā jajāna.*

⁴ Perhaps also ii. 17. 6; but in this passage *pitū* is doubtless Tvastar, the father, i. e. the creator, of the thunderbolt.

⁵ *ubhé yād indra rōdasi āpaprāthoṣā iva: mahāntar tvā mahīnām sam-rājam carṣaṇīnām devī jānītry ajtjanad bhadrā jānītry ajtjanad.*

following: x. 73. 1: "Thou wast born a mighty one unto destructive power, lovely, most powerful, threatening many; the Maruts cheered on Indra when his very swift mother taught him, the hero, to run;" and ii. 30. 2: "The mother announced unto the sage who it was that should rob Vṛtra of his possessions." More significant for the poet's caution than for Indra's parentage is x. 120. 1: "Among all creatures that was the noblest, from which the mighty one, he of impetuous strength, was born."

Finally we come to two very puzzling verses: vi. 59. 1: "Now at the Soma-feast I will proclaim your heroic deeds; your parents are slain, overpowered by the gods; but ye, Indra and Agni, remain alive." Ludwig translates "the pitar, hostile to the gods, were slain by you," which is an ungrammatical rendering of the Sanskrit; while Grassmann proposes *piyavaḥ*, 'slanderers,' for *pitarah*. Again, v. 2: "Ye had the same father, and ye are twins; your mothers were in different places." The mythical relations are here extremely obscure; it is even doubtful whether there be any real connection between the two verses. I will return later to v. 2, and proceed at once to the fourth and last group.

4. *Conceptions of Indra's Origin which rest upon Speculation.*—It is but rarely that the poets personified any ethical qualities, as for instance in viii. 58. 4, Indra is called *sūnuḥ satyasya*, 'son of truth.' In nearly every instance he is still the god of thunder and war, who does not belie his original character even in this abstract theogony. For instance, we read in x. 73. 10: "If any say 'he is sprung from a horse,' I believe him born also of might; he came forth from rage, and stands now in the houses; Indra knows from whence he is born." It must however be remarked that the verse is susceptible of another explanation, by which Agni instead of Indra becomes its subject: "From a horse (the sun) did he (Agni) proceed, from power, from fury; now he stands in (human) houses (i. e. as the fire on the hearth or the domestic altar); only Indra knows whence he (Agni) was born." Compare with this interpretation the

¹ jāniṣṭhā ugrāḥ sáhase turāya mandrá ójīṣṭho bahulābhimānaḥ: ávar-dhanu indram marútaḥ cid átra mātā yád vírah dadhánad dhániṣṭhā.

² yó vṛtrāya sīnam átrābharīṣyat prá tám jānitri vidúṣa uvāca.

³ i. 155. 3. said in Anukr. to be directed to Indra and Viṣṇu, really has reference to Viṣṇu only.

⁴ prá nú vocā sūtēṣu vām víryā yāni cakráthuḥ: hatāso vām pitāro devācatrava indrāgni jīvatho yuvām.

⁵ samāno vām janitā bhrātarā yuvām yamāv ihēhamātārā.

⁶ áçvād iyāyēti yád vādanty ójaso jātām utá manya enam: manyór iyāya harmyēṣu tasthāu yātāḥ prajāñā indro asya veda.

verses (v. 2. 8 ; x. 32. 6) in which is related how Indra revealed the hiding-place of Agni, who had disappeared. Who in fact should understand the nature of the mysterious lightning better than the thunder-god ?

With the last line of x. 73. 10 is to be compared what is said of the Maruts, the storm-winds ; vii. 56. 2 : "No one knows their birth, yet they among themselves well know their descent." I regard this as pointing toward Indra's original significance as god of the thunderstorm. As are the swiftly-passing storms, so is their supreme head—whence they come, or whither they go, who can say ? "The wind bloweth where it listeth," etc.

Further, we have to consider the following passages. In viii. 81. 14, Indra is called *putrah çavasah* ; and in iv. 24. 1, *çavasah sinuh*—both signifying 'son of might' : cf. x. 153. 2 : "Thou wast born of strength, Indra, of might, of power ; thou, O Giant, art truly a giant." The epithet *goṣano napāt*, 'son of a cow-winner (i. e. of a cloud-winner),' in iv. 32. 22, proceeds no less than the foregoing from conscious speculation, as will be seen hereafter. In x. 90. 13 (the Puruṣa-hymn) we read that Indra and Agni sprang from Puruṣa's mouth. Likewise the already quoted verses viii. 45. 4 and 5, and 66. 1 and 2 belong in this connection ; for *çavasī*, 'Might,' used unmistakably in this place as a proper name (cf. *devī taviṣī*, i. 56. 4), is a mere personification of Indra's most prominent characteristic. When once the idea that Indra was the 'son of might' (*çavasah*, gen. sing. neut.) had been thrown out, the transition to *Çavasī* (fem.), 'Might' personified, was natural and easy.

Finally, in x. 101. 12 we find Indra called Son of Niṣṭigri. The word *niṣṭigri*, which occurs in this passage only, still remains an etymological riddle. Sāyaṇa's explanation is wholly unsatisfactory—he identifies Niṣṭigri with Aditi, and explains the word by *niṣṭim girati*, i. e. 'Aditi swallows her rival Niṣṭi,' whom he makes identical with Diti — and it remains an open question whether Niṣṭigri be not, like the previously mentioned *Çavasī*, a purely abstract character.

The more closely one examines these passages in detail and in their connection, the more hopeless seems the task of finding therein a fixed tradition, current in Vedic times, of Indra's descent. It is fair to suppose that the earliest conceptions made in Indra's case no exception to the rule which regarded Heaven and Earth as universal parents. That Dyū was viewed as his father is evident from iv. 17. 4 and iv. 18. 12,

¹ tvām indra bālād ādhi sāhaso jātā ójasaḥ : tvām vṛṣṇan vṛṣṇéd asi.

quoted above. Further, x. 54. 3 reads: ' "When thou didst produce from thine own body father and mother together," upon which Muir (Sanskrit Texts, v. 30) remarks "by which Heaven and Earth are clearly intended." Either such passages are mere outbreaks of boldest fancy, or else we must explain the word *jan* as in viii. 36. 4 (*janitā divo janitā prthivyāh*) where the 'creation' (*jan*) of Heaven and Earth means nothing more than the 'holding' or 'supporting' (*dhr*), or the 'fixing, fastening' (*skabh, stumbh*), of other verses. Reference is therein made to Indra's restorative activity, which gives back to earth and sky, when shattered and in confusion through the strife of the elements, their former quiet and order. The passage iv. 18. 10—*gr̥stīh sasūva* etc. (with which cf. x. 111. 2, *gār̥steyo vṛṣabhah*), could perhaps relate to the earth; but I prefer, in view of viii. 6. 19, 20 and ii. 11. 8, to refer *gr̥stīh* to the rain-cloud. Still, the poets need not on all occasions have intended to express particular cosmogonic ideas by such words. The well-known penchant of Vedic sages for the cow-yard in their hymns may surely have led one poet to think of Indra and his mother as calf and cow, without conveying under the image of the 'cow' any deep mythical meaning.

The words *açvād iṇāyēti yad vadanti*, in x. 73. 10, I can hardly explain otherwise (supposing them to refer to Indra at all) than that *açva* refers to the sun, as in i. 163. 2 the horse undoubtedly typifies the sun. Ludwig (*R. V. Uebersetzung*, iii. 318) regards the horse as symbol of the sky, and quotes to sustain his position x. 68. 11: which verse however contains merely a very natural simile, in which a dark horse bedecked with jewels is compared to the nocturnal sky with its glittering stars, and which proves nothing. But the adoption of the sun as Indra's father would involve us in insuperable difficulties. It is quite possible that the statement *açvād* etc. is no less referable to conscious speculation than those contained in the following lines of the same stanza. The horse, as well as the bull, is often the symbol of strength and courage, and why should not a poet of bold fancy imagine Indra descended from such an animal? The word *vṛṣan*, used innumerable times of Indra, might in fact be translated 'stallion' as well as 'bull,' provided one tastelessly insist upon rendering the word on all occasions by the name of some particular animal.

There is some temptation to draw from vi. 59. 2 ("Ye are twins, Indra and Agni, ye had the same father, your mother in different regions") a conclusion as to Indra's parentage. In the verse x. 45. 8 Agni is son of Dyū; in iii. 3. 11 and 25. 1, and x. 1. 2, the son of Heaven and Earth. If now we are to

¹ *yān mātāraṃ ca pitāraṃ ca sākām ājanayathās tanvāḥ svāyāḥ.*

hold fast to vi. 59. 2, then Prthivī, the Earth, cannot be Indra's mother. However, the accounts of Agni's parentage are even more confused and contradictory than those of Indra's, and bear no credible witness.

No wonder then that the Indians soon had recourse to speculation to fill out the remarkable gap apparent in the myths of their favorite god. Thus only can I account for such theogonic ideas as those contained in group 4, above. From Indra's chief attributes of might and impetuosity arose the personification Çavasī, 'the mighty one' or 'might.' Compare with this *dhan-isthā mātā*, 'the very swift mother,' a title which suits neither Aditi nor the Earth. Similarly, from the conception of his battles with the rain-stealing demons was derived the epithet *goṣaṇo napāt*. In mythological systems the son is accustomed to display his activity in the same field with his father. It was Indra, more than any other, who captured the cows, i. e. the rain-clouds; he may therefore well have been the son of a cow-capturer; and there is no necessity for a strained explanation of *goṣaṇ* as equivalent to the sky, or to anything else in particular. I prefer therefore to view these words also as merely the expression of a conscious deliberation, and adaptation of the legends concerning Indra.

III. *Fields of Indra's Activity, and his Relations to other Divinities, and to his Worshippers.*

Among all Indra's deeds celebrated in the Veda, most important are his coercion of the evil spirits of the air, who in Indian belief arrested the rain, so full of blessings for earth and mankind, and gathered them into compact clouds; and his deliverance of the heavenly streams from their power. No department of his activity is made so prominent, no act of his power related so often, in so many various forms, or with so many poetic embellishments; and the god is besought for no other manifestation of mercy with such fervor as for this: all of which is a further indication of his natural position and duties among Vedic divinities. He is above all the god of battle—of battle in the first instance against the demoniac rain-stealers, then further against all other demons and witches; and he finally becomes the ideal of a pugnacious unconquerable hero and warrior, who defends his Aryan worshippers in their battles not only with non-Aryans, but likewise with those of kindred race.

To a correct understanding of the passages which treat of this manifestation of Indra's might, two things are necessary. We must in the first place consider how immensely greater is the effect of the thunderstorm in India, particularly among the

gigantic mountains of Northern India, than with us—how sudden and overwhelming its approach, and yet how eagerly it is prayed for, and by what beneficial effects it is followed.¹ In the second place, we must bear well in mind the peculiar Vedic conception of the rain, especially of the thunder-storm. This is as follows: The original source and home of the waters² was thought to be the highest heaven, *paraman vyoman*, the region peculiarly sacred to Varuna; and it is this deity who sends forth the rain that it may descend upon the earth. So e. g. ii. 28. 4: "The creator let the streams flow, they run as Varuna directed; they fail not, nor become weary; they spread over the land like birds." (Compare Roth's *Erläut. zum Nirukta*, x. 4.) But the air-demons arrest and carry off the rain-streams, which the poets symbolize by the figure of cows, and imprison them in their caves in the cloud-mountains. Now Indra appears upon the scene, commissioned by the gods to set the waters free; he conquers the demons and liberates the streams, which thereupon continue undisturbed their journey to earth, led by Indra's attendants (cf. x. 99. 4); sun, dawn, and sky emerge from the temporary obscurity of the battle, and the gods, who, terrified by the dreadful contest, had retreated to a place of safety, recover once more free scope and peaceful exercise of their influence through Indra's victory. The evil spirits which disturbed the whole course of nature are pursued to the uttermost regions of darkness; quiet and order are completely restored.

About this conception of a natural phenomenon, as about a core, were gradually crystallized various fantastic creations of the Vedic bards; and their descriptions of this mighty event were interwoven with many single features, some of which had likewise reference to occurrences actually observed in nature, while others admitting of no such explanation must be considered rather as transferrals of purely human experiences into superhuman spheres of action. In fact, we find Indra (and his opponents) conceived of and described much more like human beings than are any other divinities; for which doubtless the reason lay partly in the less morally sublime than fierce and overbearing nature of the thunder-god, partly in the particularly close relations subsisting between Indra as war-god and his worshippers, who were still engaged in bitter contests for empire with the aboriginal inhabitants of India whom they displaced.

¹ Compare Zimmer, *Altindisches Leben*, p. 42, and his citations.

² In the Veda "water" and all corresponding terms, such as stream, river, torrent, ocean, etc., are used indiscriminately of the water upon the earth, and of the aqueous vapor in the sky or the rain in the air.

In the enumeration of passages belonging in this connection I will first give those which refer plainly to events in nature, then such as contain purely poetical embellishments. The very great number of such verses precludes the mention of any but the most important.

The arch-demon among the rain-stealers is *Vṛtra*, whose name is a plain enough indication of his nature. I prefer, notwithstanding Lindner's mention (*Altindische Nominalbildung*, p. 82) of the difficulties offered by the unstrengthened root-vowel, the common derivation from 1 *vṛ* 'cover, wrap, hem in, hinder, restrain'; for between the root proposed by Lindner, viz. *vṛt*, and the word *vṛtra*, the connection of meaning is difficult to trace. The various meanings of the Sanskrit *vṛtra*, as of the Zend *verethra*, are to be classified as follows: *vṛtra*, first 'hindrance, defence' (Zd. *verethra*); then 'that which is to be hindered, warded off,' concrete 'enemy,' as in Zend *verethra-jañ*, 'slayer of enemies' (Yaçna xlv. 16); finally, 'the enemy *κατ' ἐξοχῆν*, the Indian demon *Vṛtra*.' The etymon was still plainly felt by the poets. Passages like iii. 32. 6: 'the impious one who enveloped the divine (waters)' (lit.: 'the goddesses')—cf. vii. 21. 3: 'the dragon who surrounded the waters'—rest upon a not very accurate play upon words, since, according to the development of meanings given above, *vṛtra* did not quite signify 'the enveloper.'

In most verses *Vṛtra* is identical with *ahi*, 'the dragon:' i. e. he is thought of under the form of a dragon; and the descriptions of him correspond: so particularly in the fine hymn i. 32, and in the following verses: iv. 17. 7: "Straightway after thy birth, O Indra, thou didst put all nations to fright; thou, O generous one, didst hew in pieces with thy thunderbolt the dragon which lay upon the mountain-slope" (i. e. either upon the clouds or upon the actual mountains). With this verse compare the others of the same hymn, wherein the monster is called *Vṛtra*, and also x. 113. 3: "When thou, bearing thy weapons, didst come together with the dragon *Vṛtra* for battle, to win for thyself glory." Also cf. vi. 72. 3, and 20. 2. In the following he is called a wild boar: i. 121. 11: "Thou mighty one with the thunderbolt didst sink *Vṛtra*, the boar that lay across the river-beds, in sleep"—i. e. the sleep of

¹ *vavrivāṁsam pāri devīr ādevam.*

² *apāh pāriṣṭhita āhinā.*

³ *tvām ādha prathamāñ jāyamānō 'me vīçvā adhithā indra kṛṣṭiñ: tvām prāti pravāta āçāyānam āhiñ vājreṇa maghavan vī vṛçaḥ.*

⁴ *vṛtreṇa yād āhinā bībhrad āyudhā samāsthithā yudhāye çāṁsam āvide.*

⁵ *tvām vṛtrām āçāyānañ sirāsu mahō vājreṇa siçvapo varāhum.*

death. But he is sometimes styled simply a wild beast, as in v. 32. 3: "Indra hurled with force his weapon against that great beast."

These different names for Vṛtra, like the large majority of the many and various appellations given to the lesser demons, are but different names for one and the same thing: namely, the cloud, which in its manifold forms presented itself most forcibly to the eye of the poet in the likeness now of this, now of that creature. And it was not alone as hostile and mischievous demons in human or animal form that the clouds were symbolized—we find them described as mountains, as in ii. 11. 7: "Still stood the mountain, which was about to move;" and 8: "the restless mountain sat there motionless"—or as forts belonging to the demons (ii. 20. 8), or their skilfully fortified dwellings, which Indra has to carry by assault (i. 55. 6); and in the caves where the evil spirits hide the stolen rain-cows, as well as in the cows themselves, which emit from their swelling udders the milk, i. e. the rain, we can discover only clouds. In short, in the ever-changing panorama of the thunderstorm the Indians saw represented their own encounters with wild beasts, assaults upon forts and ambuscades, recovery of stolen cattle, and many others of their earthly experiences.

Details of the battle which Indra fights with Vṛtra, as they were struck out from the fancy of different poets, may prove not uninteresting.

The dragon envelops himself in mist: ii. 30. 3: "He (Indra) stood on high in the air, and directed his missile against Vṛtra; when that one, wrapping himself in mist, rushed headlong upon him, Indra with sharp weapon conquered the enemy." That the subject of pāda c is Vṛtra, and not Indra, is shown by i. 52. 6: "When thou, O Indra, didst launch thy thunderbolt into the depths upon the cheeks of Vṛtra, who was hard to grasp, then fury fell upon him, his strength was aroused; wrapping the waters about him he lay at the bottom of the atmosphere." The epithet *miho napāt*, 'son of vapor,' v. 32. 4, seems likewise to refer to Vṛtra (or Ṣuṣṇa). Cf. German *Nibel-ung*. According to x. 73. 5, he throws out mist to confuse his conqueror. He even seeks to defend himself with thunder, lightning, and hail (i. 32. 13), and by his rapid and

¹ tyāśya cin mahatō nīr mṛgāśya vādhar jaghāna tāviṣṭbhīr indrah.

² āraṇṣta pārvataḥ cit sariṣyān.

³ nī pārvataḥ sādya āprayuchan.

⁴ ūrdhvō hy āsthād ādhy antārikṣe 'dhā vṛtrāya prā vadhām jabhāra: miham vāsāna ūpa him ādudrot tigmāyudho ajayac chātrum indrah.

⁵ pāriṇ ghrṇā carati tītviṣe cāvo 'pō vṛtvī rājāno budhnām āṣayat: vṛtrāśya yāt pravaṇe durgbhiḥcivano nijaghānta hānvor indra tanyatām.

violent movements to terrify his opponent: i. 80. 12: "Neither by his flapping (with his tail), nor with his thundering did Vṛtra terrify Indra; the brazen thousand-pointed thunderbolt flew at him."

Indra takes the field against this monster at the command of the gods, who are themselves unable to withstand it: iv. 19. 1, 2; vi. 20. 2 (see under "Indra and Viṣṇu"); ii. 20. 8: "Unto Indra the gods gave without reserve the chief command in the battle for the water-floods; when they had put the thunderbolt into his hands, having slain his enemies, he possessed himself of the brazen castles." Cf. iv. 17. 1; x. 28. 7: *indra* (voc.) in pāda *b* is certainly a mistake, since Indra speaks the verse. Grassmann tries to elude the difficulty by assuming instead of *indra* a vocative addressed to the poet—a procedure both violent and unnecessary. There is no objection to reading *indram* (acc.)—that the nasal sometimes fails to make position is shown by iv. 41. 4: *vadhīṣṭhaṁ vajram*; thus it was easily lost. By reading *indram* we reduce the verse to perfect order: "Thus have the gods made me, Indra, in every work a strong, a mighty giant; I smote Vṛtra lustily with the thunderbolt; I opened by my might the cowstall for the worshipper."

When Indra begins the battle, the other gods abandon him for fright: iv. 18. 11; viii. 82. 14, 15; and especially viii. 85. 7: "Shrinking from the snorting of Vṛtra, all the gods, thy companions, left thee in the lurch." But as soon as they see that Indra nevertheless ventures the attack and remains victor their courage returns, and they sing to him songs of joy (x. 113. 8). So dreadful is the fight that heaven and earth and all creatures tremble (vii. 21. 3); the heavens shrink from Indra's lightnings (vi. 17. 9); and Tvaṣṭar, though he had himself forged the thunderbolt, falls prostrate in terror at its dreadful effects (i. 80. 14). Perhaps even Indra would not have been able to overcome his enemy, had he not beforehand imbibed with a copious draught of Soma the requisite courage and strength; this however gives him power invincible (v. 29. 3, 7; iii. 43. 7; vi. 44. 14; ii. 19. 2). The other gods, so imagined one poet, found the same means efficacious for providing them with courage, or at least with forgetfulness

¹ ná vépasā ná tanyaténdrah vṛtró ví bíbhayat: abhy ènam vājra āyasāḥ sahāsrahṣṭīr āyata.

² tasmai tavasyām ānu dāyi satréndrāya devébhir ārṇasātāu: prāti yād asya vājram bāhvór dhūr hatvī dāsyūn pūra āyasīr ní tārīt.

³ evā hí māñ tavāsah jajñūr ugrām kárman-karman vṛṣṇam indra devāḥ: vādhiñ vṛtrām vājreṇa mandasāno 'pa vrajām mahinā dācūṣe vam.

⁴ vṛtrāsya tvā çvasāthād īṣamāṇā viçve devā ajahur yé sakhāyah.

of their danger: x. 113. 8:¹ “All the gods then cheered on thy heroic strength with soma-excited eloquence.” Cf. vi. 18. 14. Likewise the goddesses, the now liberated waters, sing praises unto him: iv. 22. 7: “Then, O thou with sorrel steeds, did these divine sisters greet thee with joyful shouts, when thou didst free (them) the oppressed ones, that they might flow for long time.” Cf. i. 61. 8.

Indra's weapon is either *vajra*, the thunderbolt, which Tvaṣṭar fashioned for him (v. 31. 4 *et saepp.*), or *adri*, *açman*, *parvatu*, a mere piece of rock or stone for hurling. Myriantheus (*Die Äqvins*, p. 145 ff.) refers the following passage likewise to the lightning: i. 84. 13: “With the bones of Dadhyañc the irresistible Indra smote the ninety-nine enemies dead”—an explanation doubtless quite satisfactory to the large class of mythologists who explain everything which cannot refer to the sun or the dawn by the lightning. (Comp. Pet. Dict. s. v. *dadhyañc*; and Zimmer, *Altind. Leben*, p. 20.) Indra carries also bow and arrows (viii. 45. 4; 66. 6, 11; x. 103. 2, 3), and a spear, *ṛṣṭi* (i. 169. 3); but I have not noticed any instance of his using these weapons in battle against Vṛtra. But he hurls foam at the demon Namuci, perhaps to blind him (see the curious explanation for this devised by the author of *Çatapatha-brāhmaṇa*, xii. 7. 3. 1 ff.; Muir's Sanskrit Texts, v. 94), and ice (snow or hail?) at Arbuda (viii. 32. 26); he also dashes clouds upon them.

At his approach he finds the dragon lying there careless (v. 32. 2), and even asleep (iv. 19. 3), for he (Vṛtra) considers himself invulnerable and immortal (v. 32. 3); but awakes him with the thunderbolt (i. 103. 7). The dragon seeks to defend himself with stratagems, but Indra is more cunning than he: v. 30. 6: “Indra overcame with craft the crafty, lurking dragon which lay upon the waters;” or his cunning is of no avail against the god's overwhelming power, as in x. 111. 6: “Thou, O Vṛtra-slayer, didst cast down Vṛtra with the thunderbolt, thou didst scatter the wiles of the mighty enemy of the gods; thou didst strike home with courage, O courageous one, thou wast then strong in thy arm, O generous giver.” Indra strikes off Vṛtra's head with the hundred-jointed thunderbolt (viii. 6. 6), tears Vṛtra himself in pieces (v. 13), and casts him under his horses' feet (v. 16). Now he turns to the treasure of heaven, the waters imprisoned in the cloud-rock, *açman* (i. 130. 13); he hews asunder the clouds as a carpenter hews a tree (v. 4); he lets out the streams and they flow to earth. Hence it is said (viii. 12. 6): “Indra spreads abroad the rains

¹ *vīcve devāso ádha víṣṇyāni té 'vardhayant sômayatyā vacasýāyā.*

of heaven." The fight concluded, Indra hastens away with such speed that one would think an avenger of Vṛtra to be at his heels (i. 32. 14): i. e. the storm pursues its rapid journey, and the sky again becomes clear. As reward for this deed of valor, Indra receives the early oblation.

A list of the demons mentioned by name as opponents of Indra, with brief discussions of the principal ones, will be found in an appendix.

After the above description of the battle against the rain-stealing demons, any exhaustive treatment of the passages relating to the subjection of other demoniac creatures would be unnecessary. We should only have to emphasize the fact that Indra, just as he conquers the rain-hindering demons, likewise, and in most intimate connection with this victory, defeats the spirits who arrest the light, through his power as manifested in the battle of the storm. For the black storm-clouds envelop and conceal the light of heaven, and it is only after the god has driven them away, or, in Vedic parlance, has put to flight the spirits of darkness, that the heavenly radiance again streams upon the earth. By a very natural extension of thought, Indra was then imagined as taking the field against spirits of darkness in general, and especially the nocturnal spirits who pursue their mischief in the gloom. Hence no further commentary is necessary upon verses like the following, according to which Indra appears as hostile to 1. enemies of the light of heaven; and 2. evil spirits in general, hobgoblins, spectres, etc.

1. i. 121. 10: "Before the sun is caught by the darkness, O slinger, hurl thy missile against the cloud;" viii. 65. 4: "It was Indra, the friend of the Maruts, by whom this light was won for the Soma-drinking" (cf. v. 40. 6); iii. 34. 4: "Indra the light-winner, the creator of days, the patron, won with his friends the battle; he kindled for mankind the lamp of the day (i. e. the sun); he found the light, for a great joy." Cf. i. 171. 5; ii. 12. 7; x. 27. 24.

2. Numerous passages, a selection from which I append, describe Indra as conqueror of other evil spirits. In vi. 22. 4, e. g., he is called *asura-han*, 'demon-slayer'; in x. 99. 3 he destroys the *çîçnadevân* (Cf. Pet. Dict., s. v.; acc. to Grassmann, 'demons with tails'), and in v. 10 *ararum yaç catuspât*, 'the four-footed monster.' He kills the Dasyus (viii. 65. 11), the

¹ purā yāt sūras tāmaso āpītes tām adrivaḥ phaligām hetīm asya.

² ayān ha yēna vā idān svār marútvatā jítām: indreṇa sōmapīṭaye.

³ indraḥ svarṣā janáyann áhāni jigāyoçigbhiḥ pītanā abhiṣṭīḥ: prārocayan mánave ketúm áhnām ávindah jyótir bṛhaté rāpāya.

Dāsas (vi. 47. 21), and the Rakshases (vi. 18. 10).¹ The boldness of these demons is described for us in viii. 14. 14 :² “Thou, O Indra, didst shake off the demons which sought to creep up, to scale the heaven by stealth.” According to x. 23. 5, he kills them merely by the sound of his frightful voice: cf. x. 48. 6; viii. 85. 9; i. 33. 7; viii. 12. 9.

The verse vii. 104. 22 shows what manifold shapes the Vedic poets imagined the demons to assume :³ “Destroy the fiend as great owl, as little owl, as dog, as cuckoo, as vulture; grind up, O Indra, the Rakṣas, as though with a millstone” (i. e. as thoroughly as with a millstone). i. 29. 5 mentions ass and vulture as among the animals to be destroyed, doubtless because they were viewed as incorporations of evil spirits; or perhaps the ass’s braying disturbed the honest poet while he was “beholding” a beautiful hymn.

For the sake of completeness, I will introduce here a trio of verses relating to certain female demons: i. 133. 1-3 :⁴ 1. “I purify both worlds as is right; I burn the great evil spirits (fem.) who do not acknowledge Indra,” strangling them in the place where the enemies are lying, defeated and shattered, about the skulking-place. 2. Strangling them, O slinger, crush with thy armored foot, with thy mighty armored foot, the heads of the witches. 3. Dash, O generous giver, the whole crew of these witches upon the dust-heap in the great skulking-place.” A witch Dhvaras (provided the word can be taken as nom. pr.) is mentioned in iv. 23. 7; and we read in ii. 20. 7 of *dāsīḥ kṛṣṇayonīḥ*, ‘black-lapped witches’—with which compare the expression in x. 155. 4, *mandūrādhānikīḥ* (Pet. Dict. *cunni robigine* [i. e. *squalore*] *obsiti*).

The mythus of the robbery of the rain-cows by the Panis (lit. ‘niggards’; here an appellation of certain water-stealing demons), and their recovery by Indra, received exceptional development. Indra, either accompanied by the Angiras, a

¹ Dasyu and Dāsa may be names applied to the non-Aryan inhabitants of India: compare Zimmer, *Altindisches Leben*.

² *māyābhīr utsīrṣṣata indra dyām ārūruṣataḥ āva dāsyūn adhūnu-thāḥ*.

³ *ślūkayātum ṣuḷūḷkayātum jahī ṣváyātum utá kókayātum: supar-ṇáyātum utá gṛdhrayātum drṣádeva prá mṛṇa rákṣa indra*.

⁴ *ubhé punāmi ródaśi ṛténa drúho dahāmi sám mahīr anindrāḥ: abhivlágya yátra hatá amitrā vāilasthānām pári tṛḷhā áceran. abhivlágya cid adriṣaḥ ṣiṛṣā yātumátinām: chindhī vaṭūriṇā padā mahávaṭūriṇā padā. ávāsām maghavañi jahī ṣárdho yātumátinām: vāilasthānaké armaké mahāvāilasthe armaké*.

⁵ *anindrāḥ* may mean simply ‘godless, impious:’ cf. Muir, *Sanskrit Texts*, v. 123.

mythical race of ancient singers, or for their benefit, sends his female messenger Saramā (who in the Veda does not appear as a bitch or otherwise in lower animal form) on ahead, to discover the cows hidden by the Panis. Saramā finds their tracks, whereupon Indra appears, forces the passage into the cave of the Panis, and liberates the imprisoned cattle. Thus, i. 83. 4: ' "Then the Angiras received the greatest power, because they diligently and faithfully kindled fires of sacrifice; the heroes captured the whole possession of the Panis, the herds rich in horses and in cows." Cf. viii. 14. 8; 52. 3. Again, i. 62. 3: ' "By command of Indra and the Angiras, Saramā found sustenance for (our) posterity; Brhaspati' split the rock, and found the cattle; the heroes bellowed in company with the cows." And iv. 16. 8: "When thou didst break open the rocks of the waters, then appeared thy Saramā first (i. e. she led the way); as our leader, open up unto us great booty, breaking open the cattle-pen, urged on by the Angiras."

The richest and most dramatic development of this episode is found in x. 108. The hymn is explained in the *Siebenzig Liedern* of Geldner and Kaegi. The contents are briefly as follows: Indra's messenger Saramā finds the way to the Panis, who have hidden the stolen cattle at the ends of the earth, and demands them back. Boasting of their courage, the Panis will not hear of a restitution. Upon Saramā's representing their destruction as inevitable, they declare to her that the flocks and treasures are not at hand, but hidden in the mountains; and they attempt to induce the messenger to remain with them. She rejects the offer and advises them to flee. The last verse relates the accomplishment of what Saramā had foretold.

This battle of Indra's against the demons is, directly or indirectly, the cause of his being associated with many other gods, some belonging to his own, some to other spheres of nature. I now proceed to discuss these associations, and will first treat

¹ ād āngirāḥ prathamām dadhire váya iddhāgnayaḥ śamyā yé sukṛt-
yáya: sárvaṁ paṇéḥ sām avindanta bhójanam áṇvāvantam gómantam ā
paçúḥ nárah.

² indrayāngirasāḥ ceṣṭāu vidāt sarāmā tánayāya dhāsim: bṛhaspátir
bhinád ádriḥ vidád gāḥ sām usríyābhir vāvaçanta nárah.

³ The presence of Brhaspati in these battles will be explained below, under "Indra and Brhaspati." In x. 67. 7, Brhaspati appears alone as recoverer of the stolen herds, although in the preceding verses Indra fills this part; in ii. 24. 6 he is accompanied by allies, whose names however are not mentioned.

⁴ Vā, properly 'bellow, low;' an expression less offensive, when expressing the heroes' joyful shouts, to the Vedic poets than to us. I know of no suitable English word for this passage.

of those depending immediately upon the conception of Indra as a warrior against the demons who steal rain and light.

Indra and Trita; Viçvarūpa.—A comparative view of all the passages of the Rig-Veda referring to Trita yields several results important for the relation in which he stands to Indra. We first discover that all the deeds accomplished by Trita are the same which otherwise Indra has to perform; and also that the two divinities do not appear as actual associates in their various acts and battles, and are not invoked, as are so many other gods, together. This might lead us to suppose Trita to be in fact nothing but a different name for Indra; for which would also speak the fact that Trita's name does not occur even once in Books iii., iv., or vii. Possibly "Trita" might be an epithet applied to Indra by poets of certain clans. But I will first illustrate these remarks by several quotations: i. 187. 1: "I will now praise heartily the draught, the preserver of strength (i. e. the Soma), through whose power Trita clove asunder Vrtra, who showed no weak spots;" viii. 7. 24: "The Maruts cheered on the courage and zeal of the battling Trita, they encouraged Indra during the overcoming of Vrtra." In Book ix. (the Soma-book), many verses bring the Soma into very close connection with Trita; and the fingers of the Soma-pressers, the mill-stones for grinding the stalks of the plant, and the three localities of the Soma-offering, are called his. In x. 46. 3, Trita discovers the hidden Agni—"Trita Vāibhū-vasa, oft seeking, found him (at last) by the cow's head" (i. e. at the extremity of the cloud: Agni=the lightning); whereas in x. 32. 6 the same thing is related of Indra. In x. 120. 6 Indra receives the title *āptya*, often applied to Trita.

From these passages alone, and from the circumstance that Indra and Trita are never invoked together, we should be almost justified in identifying Trita with Indra, in the latter's especial function as conqueror of the rain-stealers. Yet such an assumption would ill accord with other verses which allude to both gods as distinct. From the latter we should rather have to conclude that Trita and Indra are different persons; only they come into the closest possible contact in their prominent characteristics.

Moreover, whenever Trita appears with Indra he occupies a subordinate position: e. g. he offers Indra Soma, to infuse into

¹ pītūh nú stoṣam mahó dharmāṣaṁ táviṣṭim: yásya tritó vy ójasaṁ vṛtráṁ víparvam ardáyat.

² ánu tritásya yúdhyaṭaḥ ḡṣhmam āvann utá krátum: ánv índraṁ vṛtratúrye.

³ The fingers are *tritasya yojanāḥ*, 'Trita's wives,' ix. 32. 2; 38. 2; the stones, *tritasya pāṣyā* or *yojanā*, 102. 2, 3. Cf. also 34. 4; 37. 4; 86. 20.

him strength for the battle. So ii. 11. 20: "Indra, after he had refreshed himself with Trita's intoxicating draught, cast Arbuda to earth; the sun turned his wheel no longer [i. e. seemed to stand still—the same idea recurs on several occasions]; Indra with the Angiras broke open the cave;" viii. 12. 16: "When thou, O Indra, refreshest thyself with Soma in Viṣṇu's, or in Trita's, or in the Maruts' presence." Again, Indra sends Trita into battle, and imparts to him courage and strength, as in the verses referring to the destruction of Viçvarūpa Tvaṣṭra: viz. ii. 11. 19; x. 8. 7, 8; 99. 6. Or, finally, Indra captures the cattle for Trita, who then seems to have sunk to the level of a demigod or hero, and is in fact named together with such beings, as in x. 48. 2: "I Indra am defense and might of Atharvan; I got the cattle away from the dragon for Trita; I robbed the demons of their strength, and bestowed the herds upon Dadhyañc and Mātariçvan." Such legends as these furnished the later collectors of the hymns occasion to assume a Rishi named Trita, who was then adduced as author of several hymns.

In some passages, Trita seems to hold the position of a semi-divine ancestor of the powerful Grtsamada clan. Thus, ii. 11. 19: "Thou didst once (*tat*) deliver Viçvarūpa the son of Tvaṣṭar into our hands, into the hands of Trita (who was) of our race;" ii. 34. 14: "He (i. e. the *yajamāna*, 'the sacrificer') beseeches them (the Maruts) for a strong defense, for his salvation, and we too join in with this devotion; (the Maruts) whom with their wagon¹ he would bring near, unto his assistance, as Trita (brought) the five priests." According to x. 8. 7, 8, to be translated below, one might almost suppose Trita to have been Indra's son. In x. 46. 3, Trita is styled Vāibhūvasa, i. e. doubtless, 'son of Vibhūvasu'; *vibhūvasu* does not occur as nom. pr., but only as adjective, signifying 'possessing extensive wealth,' and is used of the thunderbolt (which is the instrument employed by Indra in winning the rain-cows, cattle being the chief wealth of the Indians at this period) in ix. 72. 7, and of Soma in ix. 86. 1. The epithet would suit Indra very well, and would speak for the explanation of x. 46. 3 just mentioned.

Unfortunately, all the 41 verses of the Rig-Veda which refer

¹ *ahām indro ródho vákṣo átharvanas tritāya gá ajanayam áher ádhi: ahám dásyubhyaḥ pári nṛmṇám á dade gotrá çikṣan dadhicé mātariçvane.*

² *asmábhyas tāt tvāṣṭráḥ viçvárūpam árandhayaḥ sākhyásya tritāya.*

³ *tān iyānó máhi várūtham útāya úpa ghéd enā námasā grāmasi: tritó ná yān páñca hótṛa abhiṣṭaya ávavártad ávarāñ cakriyāvase.*

⁴ *cakriyāvase = cakriyā (Instr.) + avase.*

to Trita afford no satisfactory picture of his nature, except in the points of contact with Indra. We know from the Avesta, however, that he is older than the specifically Indian mythological system. Compare on this point the essay by Roth, *Die Sage von Feridun* (Z. D. M. G. ii.), on p. 221 of which occur the following remarks: "The hymns do not present him in clear and lifelike form, as they do Indra, for instance, or the Aṇvins. He is mentioned merely in cursory allusions. . . . Trita Āptya seems to be, in the stage of mythological development exhibited by the majority of the hymns, a divinity who has half sunk into oblivion." To this points in particular the idea that he dwells in the furthest distance, for which reason all evil is banished to his neighborhood (cf. viii. 47. 13-17), upon which Roth finely remarks: "the distant, perhaps for this reason only, that he had gradually become more and more obliterated from memory;" likewise the fact alluded to above, that he does not appear either in Books iii., iv., and vii. That he is unknown to, or at least unmentioned by, the authors of Book vii., is the more remarkable, as this book is not only one of the longest, but also one of the richest in mythical material, of the whole ten. In the somewhat mystical and obscure hymn i. 105, verse 9 reads: "Where those seven (i. e. many, countless) rays of light are, thither my origin goes back; Trita Āptya knows it, he talks with my kindred." Likewise he appears as concerned in the mystical creation of the sun, in i. 163. 2, 3; and he is invoked together with other beings of obscure nature, e. g. with Ahi Budhnya, Aja Ekapād, in ii. 31. 6; he is called "the Trita of the sky" in v. 41. 4; in the three verses v. 41, 10; x. 46. 6; 115. 4, he seems identical with Agni; in viii. 41. 6, with Varuṇa; in v. 9. 5; 54. 2; ix. 86. 20; x. 64. 3, with Vāta.

For all these reasons, I consider Trita a god of the storm, older indeed than Indra, but driven into the background by the rapid growth of the Indra-cultus. If this be the correct view of his nature, then we must expect to find him standing in a relation to other gods similar to that in which Indra stands to them (cf. Hillebrandt, *Varuṇa und Mitra*, p. 94); yet these relations will be less clearly developed and treated with less completeness, because the figurative idea of every divinity is subject to gradual change, and because e. g. we cannot assume for a period when Trita, and not yet Indra, has to engage the demons, any so lofty or comprehensive conception of Varuṇa as we actually find at a time when Indra and Varuṇa stand side by side as fully developed gods. And so Trita

¹ amí yé saptá raçmáyas tátā me nábhír átātā: trítās tát vedāptyáh sá jāmitvāya rebhāt.

displays great similarity to Vāyu (cf. Roth, *loc. cit.*), while in aftertimes, although later than the Mantra-period—to use Müller's expression—Indra and Vāyu are identified; so also he stands in particular relations to Soma, as was shown above, of course for the same reason which later made Soma Indra's inseparable companion: I mean the intoxicating, invigorating property of the beverage, which as we saw was Trita's Soma. The Maruts, who encourage Indra and greet him with joyful acclamations after the happy termination of the battle, act similarly with regard to Trita: cf. the already quoted verse viii. 7. 24, which now acquires a much deeper significance. For the relations between Trita and Varuṇa I can adduce but two passages, in one of which, viii. 41. 6, he seems actually identified with Varuṇa, and in the other, ix. 95. 4, perhaps with Soma.¹ I would explain this paucity of reference to Trita and Varuṇa together by the supposition that Trita had lost much of his importance before the types of Varuṇa and Indra had gained marked fixity of outline.

A dim reminiscence of Trita's vanished glory, and an allusion to his final subordination to Indra, seem to lurk in the following difficult verse, which I am at a loss to explain otherwise: ii. 34. 10: "One sees plainly, O Maruts, your brilliant flight (path), when the sons milk the udder of Pṛṇi ('a speckled cow'; here = the rain-cloud), or when, O undeceptive companions of Rudra, (ye give over) Trita to the derision of the worshipper and the ruin of the feeble" (i. e. the ruin which befalls the feeble). In Book ii., Trita, although mentioned often enough, occupies quite an inferior position. In ii. 11. 19, he is called an ancestor of the Grtsamada-clan, for whom Indra is said to have overcome Vṛtra; in the next following verse he hands Indra the Soma; in 31. 6 his name is merely mentioned; 34. 14 contains an allusion to the summoning of the five priests, an event not mentioned elsewhere. So much the more constant, on the other hand, is Indra's praise, and more than one quarter of all the verses in this Book refer to him. Now it seems to me not impossible that the poet, to whom the earlier importance of Trita could not have been unknown, wished to allude to his displacement by Indra by making the Maruts, —Trita's former companions, but in aftertimes joined with

¹ The identification with Varuṇa is explained by Roth from the circumstance that both are conceived as dwelling in the furthest heaven; by Hillebrandt, from the fact that both control the firmamental waters. The possible identification with Soma is of little or no significance.

² *citrāṁ tād vo maruto yāma cekite pṛṇyā yād ūdhar āpy āpāyo duhūḥ: yād vā nidé nāvamānasya rudriyās tritāṁ jārya juratām ada-bhyāḥ.*

Indra—abandon their ancient leader. At the same time, I acknowledge the strained nature of such an interpretation as this.

It remains for us in this connection to notice the mythus relating to the killing of Viçvarûpa. Viçvarûpa, called Tvaṣṭar's son, is a demon who steals the rain-clouds. He is killed by Trita, who is backed by Indra; in x. 8. 9, after in verses 7 and 8 Trita has been called his conqueror, Indra is said to have vanquished him. While, however, Indra slays many other demons, when no mention whatever is made of Trita, it is only in companionship with the latter that he is declared to have overcome Viçvarûpa—a circumstance which shows clearly enough that in the original form of the mythus Trita alone endured this battle (which is shown also by the Persian Thraëtona-Feridun mythus); and that the addition of Indra to the original story is to be regarded as a consequence of the exchange in rank and importance which occurred between these two divinities.

From this point of view, the apparent contradiction in the Vedic description of the relations subsisting between Indra and Tvaṣṭar is not hard of explanation: a contradiction which the later authors of Brāhmaṇas sought to explain by attributing to Indra downright misdeeds. Tvaṣṭar is on the one hand a divine being friendly to gods and men, who fabricates for Indra the thunderbolt, the weapon employed against Vṛtra, and is consequently the friend of Indra; on the other hand he is father of the wicked demon Viçvarûpa, whom Indra kills. Hence all the ancient Indian and most modern European exegeses have thought it necessary to conclude that enmity existed between Indra and Tvaṣṭar, by no means to the former's credit, for which as further proof is adduced the circumstance that Indra drank up Tvaṣṭar's Soma. This latter episode can be readily explained in quite another way, as will be shown in the section treating of Indra and Soma; and surely no further proof is necessary for the assertion that Indra kills Tvaṣṭar's son merely because, in the Indian system, he is the successor of a more ancient divinity whose duty this was, so that no reasons for supposing any actual enmity between Indra and his armorer exist. The real difficulty is this: how did Tvaṣṭar, the trusty artificer of the gods, come to be called father of a demon hostile to gods and men alike? Which particular side of his character formed the starting-point for such a mythus?

Viçvarûpa signifies 'possessed of all forms.' Let us compare the Vedic descriptions of him with the account of the demon said in Yaçna ix. 8 to have been vanquished by Thraëtona.¹

¹ i. e. son of Thrita; in the Avesta called *Athwya*, = Vedic *āptya*.

We shall find the correspondences remarkably close. Viçvarūpa is called *triçīrṣan*, 'three-headed,' and *saptaraçmi*, 'seven-tongued' (x. 8. 8); *triçīrṣan* again, and *ṣalakṣa*, 'six-eyed' (x. 99. 6). In the Yaçna passage the opponent of Thraëtona is called *thrizafana*, 'three-jawed,' *thrikameredha*, 'three-headed,' *kṣvasaṣi*, 'six-eyed.' The particulars are identical—with the exception of *saptaraçmi*, which is perhaps better rendered as 'many-tongued'—and the very name *viçvarūpaḥ*, 'who can assume any form,' corresponds in conception to the *hazānrayaokhsti*, 'thousand-fold flexible, changeable,' of the Avesta. It now becomes evident that not merely the general idea of the conflict with a monster, but even the details of this monster's appearance, as found in Veda and Avesta, rest upon a common basis. If this be so, we can discover in the proper name Viçvarūpa merely the petrification of an earlier epithet *viçvarūpa*. The figure of the demon is Aryan (i. e. Indo-Persian); only his current appellation Viçvarūpa is specifically Indian; and also the god Tvaṣtar, as his father, is a specifically Indian addition. This circumstance excludes the possibility that the parental relation between Tvaṣtar and Viçvarūpa, which we find existing according to the Veda, rests upon a purely mythical conception, and we must look about us for other reasons.

Tvaṣtar is often said in the Veda to have created *rūpā* (*rūpāni*), i. e. forms and figures. The Tāittiriya-Brāhmaṇa, at i. 4. 7, reads: 'Tvaṣtar rules over the forms.' R. V. i. 188. 9: "Tvaṣtar, since he is the lord of forms, created all animals;" viii. 91. 8: "In order that this one (Agni) be influential among us, as Tvaṣtar among the forms which he has to fashion." But most plainly speaks iii. 55. 19: "The god Tvaṣtar, the life-giver who rules over all forms, caused posterity to grow up; he created them in sundry ways, and all these creatures belong to him." The epithet *viçvarūpa* is also applied to him in i. 13. 10; x. 10. 15.

When, accordingly, such a Proteus-like creature as Viçvarūpa, and such an all-skilful creator as Tvaṣtar, existed in Indian mythology, what was more natural than the conception which attributed to Tvaṣtar the parentage of the monster, as though he had concentrated in it all his store of forms and figures? The mythological principle that the son's nature corresponds closely to that of his parent is here as well exempli-

¹ tvāṣṭā vāi rūpānām iṣe.

² tvāṣṭā rūpāni hi prabhūḥ paçūn viçvānt samānaja.

³ ayām yāthā na ābhūvat tvāṣṭā rūpēva tākṣyā.

⁴ devās tvāṣṭā sāvitā viçvārūpaḥ pupōṣa prajāḥ purudhā jajāna: imā ca viçvā bhūvanāny asya.

fied as in the application to Indra of the epithet *goṣaṇo napā* which was explained above.

Only thus can I account for the fact that a later, specifically Indian divinity, friendly alike to gods and men, came to be regarded as father of the older, Aryan demon, hostile to both gods and men. But when the connection had once been established in the mind of an Indian bard, and recorded in song, his successors forgot at once the reasons and the justification of it and unconcernedly sang of enmity between Indra and Tvaṣṭar on account of the death of Viçvarūpa, which however was not found in the older mythic nexus.¹

Indra's relations with the Adityas, and the development of the Indra-mythos.—The relation in which Indra stands to the goddess Aditi, and to her sons the Adityas, has been discussed at considerable length by Alfred Hillebrandt, in his two works *Ueber die Göttin Aditi* (p. 42 ff.), and *Varuṇa und Mitra* (p. 97 ff.). It will be seen that my investigations have led me to conclusions quite different from those which he has reached.

In the first quoted passage, Hillebrandt assumes Aditi to have been regarded as the mother of Indra. The supposition is not new; it is found in the Brāhmaṇas, and Sāyaṇa advances it with all confidence; but it has not yet been conclusively proved correct. Hillebrandt's arguments are as follows:

1. He refers above all to the hymn iv. 18, which I have quoted in part II. It was there shown that no unity of subject extended throughout the whole hymn. In the Anukramanī it is styled a dialogue between Indra, Aditi, and Vāmadeva—the only support for Hillebrandt's theory, since we are not informed how the verses are to be divided up among the speakers. Sāyaṇa, in his off-hand way, explains the poem very skilfully as a little episode of the family life of the Gāutama clan. The sage Vāmadeva, still in the womb but about to begin his earthly career, and experiencing a powerful aversion to the conventional manner of birth, determines to open for himself a Northwest Passage, as it were—he resolves to break through his mother's side. Thereupon, according to Sāyaṇa (v. 1), Indra reminds him that not only men but likewise gods have always found the old-fashioned way good enough for them, and seeks to dissuade him from the venturesome attempt. Vāmadeva's conscience, developed even at this tender age reproaching him with the temerity of his plan, he looks about him for examples of a similar violence with which to excuse himself. And suddenly it occurs to him that the mighty Indra himself has not always proved a model of virtue—that he

¹ For instances of such perpetuation of thoughts once struck out, see Aufrecht's Introduction to his 2nd edition of the Rig-Veda, p. xii.

for instance regaled himself upon Soma in Tvastar's house, without so much as saying "by your leave" (vv. 2-4b). But Aditi, by no means pleased by these reflections upon her son (Indra), attempts by counter-assertions to vindicate his honor (4c-7). Thereupon Vāmadeva again claims the floor, speaking, however, no longer of his own birth, but of various events in the life of Indra.

This ingenious and diverting exegesis—which, if it be Sāyaṇa's own, and not perchance derived from more ancient commentators, certainly does him great credit—finds unfortunately neither in the hymn itself nor in the *Anukramanī* any confirmation whatever. Sāyaṇa was able the more consistently to advance it, inasmuch as on several other occasions he regards Indra as an Āditya; so, e. g., in x. 101. 12 (quoted in Part II.), where Indra is called "Son of Niṣṭigri," he identifies the latter with Aditi, for the word signifies 'she who swallows up Niṣi'; and Niṣi he identifies with Diti, the rival of Aditi. We who are less orthodox than Sāyaṇa in our views as to the meaning of Vedic passages find this explanation unsatisfactory when we discover the complete lack of unity existing in the hymn.

The facts of the heterogeneous nature of the hymn in question and of the almost total want of connection between the fragments which are its component parts being ascertained, any argument based upon it as a whole falls to the ground at once. Still, if there were elsewhere indications that Aditi was regarded as Indra's mother, of course Aditi might be meant by the unnamed mother of Indra in this passage. We shall search the Veda for such indications in vain.

2. Hillebrandt refers, furthermore, to the circumstance mentioned in iv. 18, that Indra kills his father and is abandoned by his mother; and he says: "The mention of his father or his mother refers in like manner to the heaven, which Indra after his birth envelops in clouds." And further on: "Indra kills his father in concealing the sun, which by its rays has gathered the clouds (!); he is abandoned by his mother when the clear sky, from which he was born, disappears behind the veil of clouds." Here is admirable reasoning! At one moment Indra's father is the sky, at the next the sun; his mother is the sky, and again the imperishability of the daylight (for this, according to Hillebrandt's very improbable theory, is the conception underlying the personification Aditi); and the covering of the sky with clouds is ascribed as parricide to Indra, and as infanticide to his mother. To bring order into the tangled relations of this sanguinary family would be a task of considerable hopelessness, and I pass on accordingly to Hillebrandt's other proofs.

3. In verse 4 of the hymn vii. 85, addressed to Indra and Varuṇa, the Samhitā-text exhibits the vocative sing. *āditya*, for which the *pada*-text gives *ādityā*, dual. Besides this passage, I know of but one other in the R̥g-Veda where the word *āditya* could possibly refer to Indra: viz. Vāl. 4. 7. There we read: *tūriyāditya hāvanam ta indriyām*. The *pada*-text separates thus: *tūriya ād-*, while Roth (Pet. Dict., s. v. *tūriya*) proposes *tūriyam ād-*. The hymn bears plain indications of a very late origin: among others, the evident modeling after the preceding hymn—a fact which greatly lessens its value as a parallel to vii. 85. 4. Returning to the latter passage, we see from 84. 4 that when Indra and Varuṇa are invoked together, *āditya* refers to Varuṇa, just as in iv. 42. 4 Varuṇa boastfully styles himself Āditya in distinction from Indra. Now it is much more natural to suppose that the author of the *pada*-text put an incorrect interpretation upon the verse—and he is proved by many an instance to be anything but an infallible authority—than to suppose that a divinity of Indra's prominence should receive only in this and the doubtful passage Vāl. 4. 7 an epithet so very significant for his whole nature as *āditya*, if the Vedic poets really regarded him as Aditi's son. Possibly the vocative singular, occurring in a verse addressed to two gods, may have appeared harsh to the author of the *pada*-text, whence he gave the form in the resolved text as dual. Another consideration, by no means unimportant, is this: it is quite indifferent for the metre whether *ādityā* or *ādityā* be read. Why then should the poet have said *ādityā* (sing.), when he meant *ādityā* (dual)? Even if we retain the dual, the expression is still no confirmation of Hillebrandt's theory, since the transferral of an epithet properly applying only to one person of a pair mentioned or invoked together to the other of the pair belongs to the best-known peculiarities of Vedic diction.

4. Finally, Hillebrandt combines viii. 12. 14:¹ “Aditi composed a song of praise for Indra,” and vii. 98. 3:² “thy mother announced thy greatness,” with iv. 18. 4–7. But until we have proved Indra to be Aditi's son according to iv. 18, this combination is worthless, since Indra is glorified by various gods and goddesses, not every one of whom is on that account necessarily his mother; and why not also by Aditi? Furthermore, the same idea of his glorification by his mother occurs in passages where any reference to Aditi is out of the question, as viii. 45. 4, 5, which were discussed in Part II. To combine the passages viii. 12. 14 and vii. 98. 3, and conclude from them

¹ āditīḥ stómam indrāya jñanat.

² prā te mātā mahimānam uvāca.

that Indra was son of Aditi, would be to imitate the character in "Pickwick Papers," who composed an essay on Chinese Metaphysics by reading up China in the Encyclopædia under the letter C, and Metaphysics under M, and combining his information.

So much for Hillebrandt's arguments. What I have to object directly to the reception of Indra among the Ādityas (i. e. for Vedic times—in later ages he was often called an Āditya) is as follows.

In the first place, I agree with Muir when he says (Sanskrit Texts, v. 12): "Indra could not have been in the opinion of the author of the Brāhmaṇa, at least as expressed in this passage (Çat. Brāhm. xi. 6. 3. 5), one of the twelve Ādityas (as he was regarded at a later period), since he is separately specified as making up the number of the thirty-three gods."

In i. 107. 2, Indra is mentioned by himself, then the Ādityas and Aditi together; so also in iv. 54. 6. In v. 51. 10 is said: "united with the Ādityas and Vasu, united with Indra and Vāyu, come hither" (addressed to Agni): cf. vii. 10. 4. And so in many other passages, with clearest distinction between Indra and beings of similar nature on the one hand, and the Ādityas, the real gods of light, on the other.

Finally, how could the circumstance that in the Veda such uncertainty prevails, and such speculation is indulged in, concerning Indra's descent, be reconciled with his adoption as an Āditya? There is no such meditation concerning Varuṇa, or Mitra, or the other Ādityas; why then upon Indra, if he was in Indian belief really an Āditya? In fact, his whole character, bold, impetuous, rough, ill consorts with the peculiarly ethical natures of the Ādityas, with their calm majesty and gracious benevolence. On the contrary, he stands to them, especially to Varuṇa, in a relation which Hillebrandt has well characterized as that between general and sovereign. Cf. viii. 82. 6 and 83. 9, and in particular the following: vi. 68. 3: "The one (Indra) smites the enemies with his thunderbolt, the other (Varuṇa), the sage, remains at home" (lit. 'among the communities').

The Ādityas, as supreme light- and sky-gods, are law-givers for gods and men, and all things stand under their dominion. Yet there are evil powers and wicked men that refuse submission to their just ordinances—demons of the air, who restrain the rains flowing from the highest heaven down to earth, who cover the bright firmament with dark clouds, and so threaten to precipitate the whole course of nature into confusion; and impious men, as well of Aryan as of non-Aryan race, who

¹ *vājrenānyāḥ cāvaśā hānti vṛtrāṁ aśakty anyo vṛjāneṣu viprah.*

oppose the faithful and ridicule their religion, and in many ways sin against the divine commands. In the natural as in the moral sphere, therefore, a defender of the laws is needed, for the Ādityas themselves are not of warlike nature—they dwell on high in the region of light, loftily distant from the strife and turmoil of the two worlds beneath them—and who should be chosen to this duty but the god of the raging thunderstorm, Indra the thunderer, irresistible by nature? Day by day with his faithful comrades he enters the battle against the goblins, they succumb to his lightnings, he regains water and light; and in like manner he assists his worshippers of Aryan blood, both when they strive with non-Aryan enemies, and when they punish the unbelievers of their own race. The following passages will plainly illustrate Indra's office as executor of punishment upon the outragers of moral law: x. 89. 8: "Thou, O Indra, a patient follower-up of evil, hewest falsehood in pieces as a knife (an axe) hews limbs; whenever men sin against the laws of Mitra and of Varuṇa, as against an allied friend." So too verse 9: cf. viii. 56. 8. Indra is also called *vratapā devānām*, 'the law-protector of the gods'—v. 2. 8; x. 32. 6. The particular reason for this belief is found in the conception of his victories over the demons of the air. There is a verse which represents the conquest of these beings and the restoration of order to the universe as taking place especially for Varuṇa's and Mitra's benefit: x. 113. 5: "Thereupon Indra mustered all his courage; he drove Heaven and Earth further apart; he hurled boldly the brazen thunderbolt, which was acceptable to Mitra, to Varuṇa, to his worshipper." From the protection of physical laws his functions were then, as is so often the case in mythological systems, transferred to the moral sphere.

As by the side of the almighty Varuṇa the other Ādityas everywhere retire into the background, so is this especially the case in their relations to Indra, whom we never find named with Bhaga, Aryaman, Anṇa, or Dakṣa, unless Varuṇa be of the company. But there is at least one passage which brings him into connection with Mitra, and one which mentions him together with Mitra and Viṣṇu: viii. 85. 6: "Let us praise him who created all these creatures on earth, which stand

¹ tvám ha tyád ṛṇayā indra dhīro 'sīr ná pārva vṛjinā ṛṇāsi: prā yé mitrásya váruṇasya dhāma yújam ná jānā minānti mitrām.

² ād indraḥ satrā tāviṣṭir apatyata váriyo dyāvāpṛthivī abādhatta: āvābharad dhṛitō vājram āyasām cēvam mitrāya váruṇāya dācūṣe.

³ tām u ṣṭavāma yā imā jajāna vīcivā jātāny āvarāṇy asmāt: indreṇa mitrām didhiṣema girbhīr ūpo nāmobbhīr vṛṣabhāḥ viçema.

under his dominion (Indra'); let us present Mitra, along with Indra, with songs of praise; let us approach the hero with reverence." And Vāl. 4. 3: " (Indra,) who receives the praises for himself alone, who boldly drank the Soma, for whom Viṣṇu took his three steps, according to the decrees of Mitra." The addition of Viṣṇu in this passage makes it highly probable that the connection of Mitra and Indra arose from the fact that Viṣṇu, as sun-god, becomes a dispenser of rain. For we find Viṣṇu mentioned as Indra's associate in the battle with Vṛtra, where he represents the ever-advancing sun. There is a doubtful passage, x. 22. 1,¹ which Ludwig translates: "Where does one hear of the celebrated Indra; among what people to-day as of Mitra?" Similarly Hillebrandt. Better, I think, is the following: "Where does one hear to-day of the famous Indra? among what nation is he said to be, as a friend?"

Let us now examine those passages in which Indra and Varuṇa appear associated. The relation of defender of the laws, in which our divinity was discovered to stand to the Ādityas, is here equally prominent; but greater importance is attached to the ethical character of Indra's services, in accordance with the peculiar nature of Varuṇa. The verses vii. 28. 4 and 84. 2, both incorrectly explained by Hillebrandt, are especially significant for this relation. Thus, vii. 84. 2: "The heaven assists your mighty government, O ye who bind with bonds which are not chains (i. e. who, without making use of actual chains, yet hold the world in actual bondage, in moral subjection); may Varuṇa's anger not descend upon us, may Indra procure for us free scope." Here *u lokam* is not 'wide-spread dominion' (*weite Herrschaft*), as Hillebrandt explains it, but 'free scope' (*freier Raum*), i. e. liberation from the restraint imposed by demons and enemies. Pādas *c* and *d* are contrasted, and the further explanation of Hillebrandt is wrong: "The wish underlying the words *pari to vṛjyā* can be only this: to pardon faults committed, and not to punish sin by suffering the enemies against whom Indra fights to gain entrance. That we may understand the verse thus is shown very plainly by vii. 28. 4"²—which he thus explains: "Protect

¹ The connection of the hymn forbids our referring pādas *a* and *b* to Mitra.

² *yā ukthā kévalā dadhé yāḥ sóman dhṛtāpibat: yāsmāi viṣṇus trīpi padā vicakramā ūpa mitrāsya dhārmabhiḥ.*

³ *kūha ṣrutā indraḥ kāsminn adyā jāne mitró ná ṣṛyate.*

⁴ *yuvó rāṣṭrām bṛhád invati dyāúr yāu setṛbhīr arājībhiḥ sinīthāḥ: pári no héjo váruṇasya vṛjyā urúm ná indraḥ kṛṇavad u lokām.*

⁵ *ebhīr na indrábbhīr daṣasya durmitrásō hí kṣitáyāḥ pávante: prāti yác cāṣṭe ánṛtam anenā áva dvitá váruṇo māyí naḥ sāt.*

us in these days, O Indra; the hostile tribes stream hither with (weapon) flashing: may the wise Varuṇa doubly loosen us from the fault which the sinless one beholds." Now, this rendering of *pavante* by *mit* (*Waffen*) *glanz herbeiströmen* is utterly indefensible and ridiculous; and the 'doubly loosen' for *dvitā* equally so (cf. Pet. Dict., s. v.). I much prefer the translation of Geldner and Kaegi: "The wicked men shall certainly do penance; be gracious unto us in those days, O Indra; may the faultless one henceforth pardon us for the sin which Varuṇa has keenly perceived." This translation reveals Indra in a much clearer and more definite relation to Varuṇa.

One of the most important moments in the association of Indra and Varuṇa is however their common character as water divinities, from which are derived the majority of conceptions of their generosity, and their readiness to assist their worshippers and to bestow children. Yet we must never forget that, while they are both water-deities, they are such for quite different reasons: Varuṇa's abode is in the sky, he disposes of the heavenly streams and dismisses them to earth; Indra's realm, on the contrary, is the broad air, and he disposes of the waters simply because he has rescued them from the demons' power. But both are givers of rain, and hence of fruitfulness and prosperity in general.

Several passages illustrating their character as givers of water follow: vii. 82. 3:² "Ye opened freely the wells of water by your power, ye led the brilliant sun up into the firmament; in the frenzy of the magic draught ye made the dried-up springs to gush anew; make our devotions to gush out." Again, vii. 85. 3:³ "The waters also, these goddesses brilliant in their abodes, placed Indra and Varuṇa among the gods"—i. e. the bestowal of rain was a truly divine deed(?). They also give the cow, the symbol of the cloud and of prosperity, and bestow wealth: i. 17. 3:⁴ "Satisfy us with riches, O Indra and Varuṇa, according to our wish; we invoke you first of all." And v. 6:⁵ "By the help of these two may we acquire and hoard up; yea, may there even be a surplus:" cf. iii. 62. 1-3.

¹ "Es sollen ja die bösen Menschen büßen; In diesen Tagen sei uns gnädig. Indra; Die Sünde, die Varuṇa fein erspähte, Mag fortan uns der fehlerlose schenken."

For *pavante*, perhaps a still better translation would be 'are sifted out,' in these days the wicked are sifted out, i. e. are separated from the good. (Geldner.)

² *ānv apām khāny atṛnttam ójasā sūryam ārayataṁ divī prabhūm: indrāvaruṇā māde asya māyīno 'pinvatam apītaṁ pinvatam dhīyaḥ.*

³ *āpaḥ cid dhī svāyacasah sādahsu devīr indraṁ vāruṇaṁ devātā dhūḥ.*

⁴ *anukāmāṁ tarpayethām indrāvaruṇā rāyā ā: tā vām nēdiṣṭham imahe.*

⁵ *tāyor id āvasā vayāṁ sanēma nī ca dhīmahi: syād utā prarēcanam.*

Further, vi. 68. 2: "By your zeal ye are the most excellent among the gods, the bravest of the brave, the most generous among the generous, of mighty courage, O ye who with your whole troop overcome the enemy as is right:" cf. also v. 5, and iv. 41. 3.

They are also often generous in the bestowal of offspring upon their worshippers, as e. g. in iv. 42. 8, 9, where Purukutsāni receives for her prayers a son Trasadasyu, and in vii. 84. 5. They are petitioned with especial frequency for help in battle. Thus, iv. 41. 2: "The mortal who by his libations gains the two gods Indra and Varuṇa for his allies, to a league with him, that one slays enemies and opponents in battle; that one becomes celebrated through their mighty help:" cf. also v. 4, and vii. 82. 2, 9. Hymn 83 of Book vii. is a thank-offering for the help extended to the hard-pressed Sudās in the battle against the ten kings: vii. 85. 2: "Men display rivalry in invoking the gods, when among the banners the bolts are flying; with the arrow, O Indra and Varuṇa, drive the enemies away, (drive them) asunder in all directions."

Of much greater interest, and also of much greater importance for a correct understanding of the two deities, than their common traits, are the differences pervading their natures—a point upon which Hillebrandt has bestowed much careful attention. The pertinent passages follow: vii. 82. 2: "All-ruler the one is called, autocrat (*Selbstherr*) the other; ye are both great and rich, Indra and Varuṇa;" 5. "Since, O Indra and Varuṇa, ye fashioned all the creatures in the whole world, Mitra in peace worships Varuṇa; the other, the mighty one (Indra), goes into battle along with the Maruts;" 6. "All the power of Varuṇa is displayed for great praise, this one's (Indra's) for his own glory; the one smites the weapon-brandishing enemy, the other with few (helpers) keeps the enemy in check." Further, vii. 83. 9: "The one smites many more in battle, the other watches continually over the ordinances;" 85. 3: "The one keeps the unruly nations in order, the other smites the irresistible enemies." Similar to the idea in vii. 82. 6 is the conception displayed by x. 66. 2, where the Maruts are said to be *indraprasūtās*, *varunapracistās*: perhaps 'led by Indra into battle, sent into the field by Varuṇa.'

These verses leave nothing to be desired in point of clear-

¹ *indrā ha yō vāruṇā cakrā āpī devāū mārtaḥ sakhyāya prāyasvān: sá hanti vṛtrá samithēṣu cātrūn āvobhir vā mahādabhiḥ sá prā ṇṇve.*

² *spārdhante vā u devahūye ātra yēṣu dhvajēṣu didyāvaḥ pātanti: yuvān tān indravaruṇāv amitrān hatām pārācaḥ cārvā vīṣṭacā.*

³ *vṛtrāny anyāḥ samithēṣu jighnate vratāny anyō abhī rakṣate sādā.*

⁴ *kṛṣṭīr anyō dhārāyati prāviktā vṛtrāny anyō apratñi hanti.*

ness. Upon the one side are majesty, dignity, repose, ethical sublimity, universal sway; on the other force, impetuosity, courage, delight in war, glory and command in battle. Hence it excites some surprise to find Hillebrandt's sharp characterization of the differences in their natures followed by statements which seem almost to imply that their characters might have been identified (p. 102): "But in spite of the intimate connection of the two gods, their natures are not completely merged; both display activity in the same direction, yet their original characters are not quite obliterated, and here and there in the Indra-Varuna hymns we find indications that the poets were well acquainted with a difference resting upon the original characters of both gods." Their natures could not be merged in one another: because, waiving the difference in their characters as ethical and non-ethical personifications, they belonged in the Veda to quite different realms of nature. What they have in common is by no means to be explained from any original similarity of character, but simply from the fact that their powers are directed to the same end, the preservation of order in the universe. Varuna is a god of light and of the sky; Indra is no sky-god (as Hillebrandt seems to suppose, to judge from the note on p. 68 of his work), but god of the thunderstorm and consequently of the air, in which, according to Vedic belief, the battle against the rain-stealers is fought out. How a god of the air could in ancient Indian (Vedic) belief be actually identified with a sky-god, be their connection ever so intimate, is to me inconceivable; but that, owing to external circumstances, such an atmospheric divinity could step into the place and usurp the functions of the other as supreme deity is not only inherently probable, but I think I can prove that this actually occurred.

It is now time to introduce the important hymn iv. 42, which I have reserved until the present moment because it offers a convenient transition to the question of the change in sovereignty. In the division of the hymn I follow Geldner and Kaegi. Verses 1-4 are spoken by Varuna, 5 and 6 by Indra, 7 by the poet; 8, 9, and 10 are later additions. Ludwig assigns v. 4 to Indra, by which Varuna and Indra, it is true, have each three verses to recite; but against this argues the fact that vv. 1 and 2 have the same refrain, which justifies the assumption of strophes of two verses each; besides, the second pāda of v. 4 is then no longer appropriate, since *putro adīteḥ* ('Son of Aditi') can only refer to the speaker, and Indra, as we saw above, has no right to this title. I adopt in verse 3 the reading *indra* (voc.) for *indrah*. Hillebrandt retains *indrah*, but his reasons are altogether inadequate. Varuna speaks: 1. "The kingdom is mine, the warrior's; all immortals are mine,

the all-enliveners ; the gods follow Varuṇa's will ; I rule over the nations with their very bodies (*upamasya vavreh*, gen., 'the nearest, innermost covering,' the skin : G. K.)." 2. "I am the king, Varuṇa ; mine are these heavenly powers even from the beginning ; the gods" etc. (as in v. 1). 3. "I am Varuṇa, O Indra ; mine are the wide, deep, firm-grounded twin empires ; a skilful creator, I formed all creatures and the two worlds, and I preserve them." 4. "I made the spouting waters to stream forth, I fastened the heaven in the seat of holiness ; Aditi's son, the holy one, spread out as was right the threefold world." Indra speaks. 5. "The heroes, skilled horsemen, the hurrying champions invoke me in the battle ; I, the generous Indra, incite the battle and I stir up the dust, I who am invincible in power." 6. "All this I did ; not the power of the gods even restrains me the matchless one ; when draughts of Soma and hymns have intoxicated me, then do the two boundless worlds tremble." The poet speaks. 7. "All creatures know thy deeds, as thou announcest them to Varuṇa, O wise one ; thou art celebrated as the slayer of enemies, O Indra ; thou didst set free the imprisoned waters."

This hymn contrasts the characters of the two divinities most sharply. And the manner in which the arguments are advanced is no less significant than the dispute itself. Varuṇa asserts in two verses his right to the supremacy, and adduces valid reasons. Indra on the contrary seems to say : "That concerns me not ; I will be supreme, for I am the strongest." In verse 7 the poet seeks to appease the jealous and insolent Indra by unreserved recognition of his power.

It is certainly true that, as Hillebrandt has remarked, the hymn contains only a sharp definition of the provinces of the two divinities ; and no actual allusion to a transferral of sovereignty from one to the other is discoverable. But let us ask ourselves : What induced the poet to make Varuṇa so strenuously assert and defend his supremacy ? What, if not the observation of that which was going on about him ? The simple fact that far more hymns and verses of the Rig-Veda have reference to Indra than to any other god shows sufficiently well that he had already, at the time when the collection was formed, become the national and favorite deity of the Indians ; but there existed still the older tradition that Varuṇa was head of the divine company. Here were two views, which, if not flatly contradictory of each other, were yet hard to reconcile ; and I perceive in the hymn quoted an attempt by a thoughtful mind to bring harmony out of the apparent discrepancy by the sharpest possible definition of the contrasting natures of the two divinities. Yet this difference of nature must have been so well known to every intelligent Indian that I see no neces-

sity for drawing so fine a distinction, except for the reason that a falling away from the unconditional acknowledgment of Varuna as supreme ruler, and a leaning to the recognition of the younger and rising deity Indra as chief had already made considerable progress.

The original signification in nature of Indra and of Varuna in the Vedic theogony, and the final ascendancy of the former over the latter, cannot be too carefully separated. For the transition does not occur in this way, that the one god, Indra, steps into the place of another, earlier divinity, Varuna, who originally belonged to the same realm of nature but was gradually forgotten; but the change was made for reasons purely external. A warring nation will naturally invoke the war-gods before all others; and the more numerous and obstinate the battles which they have to endure, the greater will be the honor paid to the deity who stands by the heroes in the fight. Moreover, the more constantly and urgently men need the assistance of any deity, and the more complete their dependence upon him for happiness, so much the deeper will naturally be their reverence for him. Now let us picture to ourselves those tropical regions, where for days and weeks together under burning, rainless sunshine all nature gasps for refreshment, for the rain which after long beseeching Indra finally releases from the demons' bondage; and let us further picture to ourselves the situation of the Vedic people—those times of ceaseless battle for existence with the aborigines whom they were slowly displacing; when, too, clans and families stood in life-long feud with one another for house and home, for land and people, and when the warlike Indra became the chief protector of the ever-warring Indians, their ideal of a mighty fighter—and we shall understand how he grew to be the favorite of all the nation; how his helping nature was able to throw Varuna's lofty person into the shade, and his cultus, originally perhaps confined to a few clans, to thrust the old Aryan worship of Varuna into the background. These are all points to which Hillebrandt has given too little attention. The facts that entirely different provinces and spheres of action are attributed to Indra and Varuna, and that the Vedic poets distinguished most accurately between their characters, can never prove that Indra had not already, at some time during the period of composition of the Vedic hymns (the "Mantra-period"), stepped into Varuna's place as supreme god. And this only do I maintain—for Indra never became a sky-god, nor god of light, nor a moral-ethical character; he was and he remained the warrior, the god of the thunderstorm in the air, the lord of the mighty battle on earth, the winner and bestower of booty, the peculiar champion of the Aryan Indians.

He never abandons his own province in nature for that of Varuṇa; but the changing fortunes of the Indian people brought it about that the war-god actually surpassed the sky-god and king of the world, Varuṇa, in importance.¹ On the other hand, we must not attempt to prove too much from the Veda. Varuṇa is therein by no means sunk to the level of a mere water- and sea-god, to the shadowy divinity of later times; nor has Indra yet reached the position of undisputed sovereignty in which the great epics present him (see for instance Holtzmann's able essay entitled *Indra nach den Vorstellungen des Mahābhārata*, in Z. D. M. G., xxxii.). But the Veda offers, as I have attempted to show, the most conclusive proof that this change began in the period while the hymns were yet being composed, and was even far advanced at the time of their collection into one whole.

I now pass to the interesting hymn x. 124, which exhibits the transferral of supremacy from Varuṇa to Indra in a very peculiar light, and has been interpreted in various ways. Verse 1. "Come hither, Agni, to this our sacrifice, which is performed in five courses, to the threefold (sacrifice) with its seven threads; be the bearer of our offering, and our leader; long hast thou lain in the distant darkness." Agni speaks. 2. "I the god, secretly stealing away from him that is no god, seek for myself a way to immortality; leaving, as an unfriendly one myself, my friend, I depart from my acquaintance to a strange clan." 3. "Seeing him (Indra) as guest among another tribe, I establish (there) many sorts of worship; saying farewell to my father, the Asura (i. e. Varuṇa), I go over from a sacrificeless lot (sc. *bhāgāt*) to a share in the sacrifice." 4. "Many years have I served that one, now I choose Indra for myself, and desert my father; Agni, Soma, Varuṇa—these are now sinking; the empire has changed its course, I help it along by coming hither." Indra speaks. 5. "These Asuras (i. e. demons) are now become powerless; and do thou, O Varuṇa, if thou lovest me,² enter (again) upon the supremacy over my kingdom, distinguishing right from wrong, O king." 6. "Here now is light, and here fair weather; here the sky, and the broad air; in future let us two kill Vṛtra; depart, O Soma, we will honor thee the libation with libations." (?) The connection of the hymn seems to be at an end here; I add the

¹ Cf. Roth, Z. D. M. G., vi. 73; Muir, Skt. Texts, v. 121 ff.

² Cf. Pet. Dict., s. v. *asura*, for the different translations of this same word in this and in the third verse.

³ *tvāṁ ca mā varuṇa kāmāyaṣe*. The accent of the verb speaks against Grassmann's translation: "And thou, O Varuṇa, must love me." See Whitney, Grammar, § 595 b.

other verses for the sake of completeness. 7. "The wise one in his wisdom gave to the sky its color; without trouble Varuṇa caused the streams to flow; the clear waters, delighting themselves there like women, impart to it (the sky) its aspect"—i. e. the clouds give the sky its ever-varying color and appearance." 8. "They obey the supreme power of Indra; he tarries among them which joyfully spout forth; choosing him for their sovereign, like communities of men, they turned away with horror from Vṛtra." 9. "Men say the companion of the heavenly waters is a crane, which roams in their company; but the wise men by their penetration discover in him the jubilant, hurrying Indra."

This curious hymn, although evidently composed of fragments, and in part very obscure, yet affords an excellent idea of the manner in which a boldly imaginative bard, from whose memory the ancient importance of Varuṇa had not yet been obliterated, sought to reconcile the dualism and dispute for supremacy which he found actually existent in the religious consciousness of his people, and to account for and illustrate most graphically the gradual subsidence of Varuṇa and rise of Indra's power. The argument is nearly as follows. Agni is no longer willing to serve Father Varuṇa, who has abdicated his ancient throne, because the honors formerly paid him are now rendered to Indra; and he, bitterly as he feels the change, must likewise go over to Indra's following. But Indra is not minded to take permanently upon himself the command bestowed upon him in the battle against the demons. After overcoming them in his capacity as general, after purifying the air and restoring peace to the world, he voluntarily invites Varuṇa to resume his supremacy in the now re-established empire.

It is very unlikely that the first six verses, as given in the text, were all of the original hymn; and it is quite certain that vv. 7-9 have nothing to do with the preceding ones, and perhaps little enough connection with each other. An article by Roth in the *Zeitschrift für vergleichende Sprachforschung*, xxvi. 45 ff., contains some valuable suggestions on the subject of these composite hymns.

Indra and the Maruts.—Indra's most constant companions in his expeditions against the demons are the Maruts, the Storm-Gods. He is called in several verses *marutvant*, 'accompanied by the Maruts,' *marutsakhi*, 'having the Maruts for his companions,' *marudgana*, 'having the troop of the Maruts about him,' and they are styled *indravantah* (x. 128. 2 et saepp.), *indrajyesthāh*, 'having Indra as leader' (vi. 51. 15). In ii. 29. 3 is found the compound *indrāmarutah* (vocative). Sometimes they merely encourage him in the battle, for the

mighty god needs no assistance; so in iii. 47. 4: "Drink the Soma, O generous giver, with the Marut-troop, who encouraged thee in the fight with Ahi, in the bitter contest with Çambara, and who now with spirited acclamations greet thee, O thou with sorrel steeds." Cf. x. 113. 8 (quoted on p. 137); v. 29. 2; i. 52. 4, 9, 10; iii. 32. 3. Also v. 30. 6: "These friendly Maruts sing praises unto thee; they press Soma for thee." In v. 29. 3 they are even called his priests, of course with reference to these services which they are supposed to render him. According to i. 101. 7 they instruct him in battle: "The sharp-witted one proceeds according to the instructions of the Rudras" (i. e. Maruts).

Their number, if given at all, is variously stated: viii. 85. 3: "Thrice sixty Maruts, worthy of sacrifice, followed thee joyfully;" i. 133. 6 mentions but twenty-seven. Their connection with Indra is of the closest: i. 100. 5: "With the Rudras, as with his sons, the bold one conquers his enemies in the battle of the heroes; may Indra the Marut-leader, undertaking expeditions with his firm allies, be helpful to us." In i. 170. 2 they are called his brothers.

As stated above (p. 137), the other gods, frightened by the violence of Vrtra's resistance, withdraw; but the Maruts are thought bolder, for Indra is advised to rely upon their friendship, that he may win all battles.

Yet indications are not lacking that sometimes the harmonious relations between them and Indra were disturbed. Thus, i. 170. 2: "The Maruts speak: 'Why, O Indra, wouldst thou kill us? The Maruts are thy brothers; remain on good terms with them; kill us not in strife,'" i. 171. 6: "Let thy rancor against the Maruts be stilled." There is a verse, viii. 7. 31, which perhaps contains the reason of Indra's anger against them: "What now? With whom were ye on good terms, that ye had abandoned Indra? Who can count upon your friendship?" It was either cowardice or treachery on the part of the Maruts, then, which broke the friendship between Indra and his companions; even his trustiest followers abandon him at times, when the fight gets thickest—conduct which Indra repays with scorn and derision in the fine hymn i. 165, translated in the *Siebenzig Liedern*. From Roth's annotations to it I derive the following summary. Indra, who commonly sets

¹ rudrāṇāṃ eti pradīṣā vicakṣaṇāḥ.

² kīṃ na indra jighāṃsasi bhrātaro marútas táva: tébhiḥ kalpasva sādhuṃ yá mā naḥ samāraṇe vadhiḥ.

³ bháva marúdbhir ávayātahejaḥ.

⁴ kád dha nūnāḥ kadhapriyo yád índram ájahātana: kó vaḥ sakhítvá ohate.

out with the Maruts as his companions, starts this time alone. The Maruts inquire 'whither?' Indra answers evasively, 'to a sacrifice.' Thereupon they are quite ready to accompany him, but Indra answers derisively that they were not so eager to follow him when he took the field against Vṛtra—an accusation which the Maruts are powerless to repel. But proving their bravery and fidelity on many occasions, and making the fullest acknowledgments of Indra's courage and prowess, they finally reconcile him to themselves.

Wilson's supposition,¹ that these verses contain an allusion to a dispute between worshippers of Indra and those of the Maruts, rests upon too slight a basis to be of importance. Probably the legend had its origin in the humorous fancy of the poet.

Indra and Vāyu.—Muir, Sanskrit Texts v. 145, says: "It is remarkable that Vāyu is rarely connected with the Maruts or deities of the storm." Our surprise will also be excited when we learn that Vāyu, though invoked in many passages together with Indra, is hardly ever mentioned as his companion in the fight with the demons. In fact, I have found only one passage—and that couched in very general terms—which points to such an association of the two: iv. 21. 4:² "(Indra) who conquers together with Vāyu in the battle for the herds:" after all, a very vague allusion. Yet the connection between Vāyu and Indra was very intimate, as we may gather from the numerous hymns dedicated to their joint praise, and from the fact that subsequently the two were identified, so that either of them without distinction is taken to represent the middle region of air with its divinities. Perhaps this striking peculiarity would be best explained by supposing the Indians to have made different personifications of the phenomena of the winds—incorporating on the one hand the storm-winds and gusts which accompany the thunder-storm in Rudra and the Maruts, and on the other imagining Vāyu either as the wind in general or else as the storm which is unaccompanied by thunder and lightning. With the latter conception the fine description of Vāta (who is surely one with Vāyu) in x. 168 would harmonize perfectly. The subsequent identification of Indra and Vāyu doubtless sprang from a confusion of their original significance in Nature, when only the consciousness remained that both exercised their influence chiefly in the intermediate region of air.

The majority of hymns in their honor consist of simple invi-

¹ Translation of Rig-Veda, vol. ii., Introd., p. vii.; and notes on pp. 145 and 160.

² *yó vāyúnā jáyati gómatīṣu.*

tations to the Soma-feast. The first draughts are theirs by right (i. 135. 4); and Vāyu even has precedence of Indra (iv. 46. 1). Both ride upon the same chariot (iv. 47. 3), and after swift horses (*vājiniवासु* i. 2. 5): vii. 90. 5: "The steeds which think through their own intelligence, which are yoked at your very wish, draw you; libations accompany your, the rulers', car, which carries heroes." Both are called *divispr̥c̥*, "skirting the heavens," an adjective applied also to their car (i. 23. 2; iv. 46. 4); and the latter is called *hiranyavandhura*, 'with golden box' (iv. 46. 4), and *niyutvat*, 'yoked with many horses' (i. 135. 4, 7; vii. 91. 6). The epithets *manojuvā*, 'swift as thought,' and *sahasrākṣā*, 'thousand-eyed,' are likewise applied to them (i. 23. 3).

As benefactors of mankind they are besought for wealth, children, and victory. Thus, i. 135. 8: "Ye drive hither to the offering of the sweet draught, to the Aṣvattha-tub in which lie the victory-giving (libations); may they be for us victory-giving; forthwith the cows bring forth and the grain ripens; thy milch cows, O Vāyu, never go dry; thy milch cows never dry up." In v. 5 of the same hymn we find the two called *vājadā*, 'givers of strength or vigor.' Cf. vii. 90. 6; 91. 2.

Indra and Soma.—The relations between Indra and Soma are easy of explanation. The verses in which the intoxicating beverage appears personified utter in poetical form the same thought as those which mention the yet unpersonified Soma.

Although all the gods have a right to the draught of the noble juice, the most precious production of human hands, yet none possess this in such a degree as Indra. It is Soma where-with his mother nourishes him on his natal day, and with which he strengthens his vigor and courage before the battle; Soma is *indrasya ātmā*, 'the soul of Indra,' and his *hṛdāṁsaniḥ*, 'giver of courage' (ix. 58. 3; 61. 14).

Both Iranians and Indians were acquainted with the Soma-plant, and the peculiarly invigorating and intoxicating effects of its juice after fermentation, even previous to the separation of their languages (Skt. *soma*, Zd. *haoma*); and they perceived in it something of divinity. As they were engaged in almost continual battles with neighbors and strangers, it is readily seen how natural it was for them not only to put their knowledge of the plant to practical use, by having recourse to a draught of Soma before entering battle, in order to banish all fear and

¹ té satyéna mánasā dīdhyanāḥ svéna yuktāsaḥ krátunā vahanti: in-dravāyū vīravāhaṁ rátham vām iṣánāyor abhí p̥kṣaḥ sacante.

² átrāha tát vahethe mádhva śhutīm yám aṣvatthám upatiṣṭhanta jāy-ávo 'smé té santu jāyávaḥ: sākām gávaḥ súvate pácyate yávo ná te váya ūpa dasyanti dhenávo nápa dasyanti dhenávaḥ.

instil courage into their hearts, but also to ascribe to the warrior *par excellence*, the war-god Indra, the use of the same expedient.

The development of the conception of Soma as a personal being brought with it a more precise definition of his relations to Indra, and likewise an extension of his helping activity into other fields of Indra's power than the war against the demons. So we find Soma exalted to a heroic, nay, divine personage; we find him associated with Indra in his battles against all sorts of adversaries; and he even shares in Indra's cosmogonic labors. In brief, whatever Indra accomplishes, Soma accomplishes with him. In many passages, notably in the ninth Book, this glorification of Soma is carried to the extremest excess.

I append a selection of passages to illustrate the different stages of progress in the conceptions of Soma. Thus, ii. 11. 10: "After he had drunk of the pressed-out juice, he brought to naught the wiles of the wily demons." So too x. 112. 5, and countless other passages where Soma is simply the intoxicating drink. But in the following it is personified: iv. 28. 1: "With thee, O Soma, for his ally, in union with thee, did Indra then make the streams to flow for mankind" (cf. the other verses of the hymn, and i. 176. 5); vi. 72. 1: "Indra and Soma, this power of yours is great; ye have performed the first of great deeds; ye found the sun, ye found light, ye defeated all darknesses and enemies." 2. "Indra and Soma, ye made the dawn blaze up, ye led out the sun with his light; ye have fastened the sky with a support, and have spread out the mother earth." 3. "Indra and Soma, ye slay the dragon Vṛtra, who envelops the waters, the heavens greet you with shouts; ye let out the floods of the streams, the water-floods spread themselves abroad." 4. "Indra and Soma, ye did place in the raw bodies of the cows the ripe milk, ye held fast in these colored bodies the sweet milk unobstructed" (i. e. the milk which streams unhindered from the cow's udder, without drying up). And ii. 30. 6: "Ye take away strength from whomsoever ye may purpose it, ye are encouragers of the upright offerers of sacrifice; Indra and Soma, ye have helped us already; procure for us free scope in this present strait." Cf. further vii. 104, a prayer to Indra and Soma for the chasing away of all sorts of demons.

These and other passages, according to which Soma, when fully personified and associated with other gods, accomplishes all the acts usually performed by them, show conclusively that we have not here to deal with any original nature-myth, but with an unusually rich and detailed embellishment of an originally very simple thought.

It was said above that Indra, beyond all other divinities, was addicted to Soma-drinking. It will be interesting to observe what expression the Vedic poets gave to their conceptions of his *facultas bibendi*. Thus, ix. 99. 3: "We strain the intoxicating draught, which is drunk chiefly by Indra." He is styled also *dyukso madasya somyasya rājā*, 'the brilliant king of the intoxicating Soma' (vi. 37. 2); and is thus addressed in x. 167. 1: "Thou rulest over the tub of the pressed-out beverage." As soon as he was born, Indra formed his habit of Soma-drinking (iii. 32. 9, 10; vii. 98. 3). According to iii. 48. 3 (quoted above, p. 128), he seems to have even preferred it to his mother's milk. He concerns himself little about *meum* and *tuum* when his favorite drink is in question, but overpowers Tvaṣṭar, and drinks up his Soma (iii. 48. 4 and iv. 18. 11).

He is invited to drink like a thirsty stag (*ṛçyo na trṣyan*: viii. 4. 10), like a bullock (v. 36. 1), or a thirsty buffalo (i. 16. 5); or as a very thirsty bull drinks a fountain dry (i. 130. 2). Nay, he drinks more than a buffalo (vii. 98. 1). His belly is compared to a pond, or even to a sea, in which there is room for the most enormous quantities of water (x. 43. 7). Soma, after he has drunk it, permeates all his limbs (iii. 51. 12; viii. 17. 5). Not only is he invited to satiate himself with Soma at men's sacrifices, but this is carried aloft to him by a falcon, *çyena* (i. 80. 2; 93. 6; iv. 26. 5; vi. 20. 6, *et saepp.*). Sometimes he indulges in more solid food at his drinking-bouts: in x. 27. 2, he consumes a roasted bull; in vi. 17. 11, a hundred of them; in v. 29. 7, three hundred; and his thirst then assumes such proportions that he drains three lakes of Soma. It was however still greater on another occasion, when he swallowed thirty lakes full of it, and that too in one draught (viii. 66. 4). He cannot wait until it is drawn for him, but gulps down cask and faucet and all (x. 116. 4). No wonder that after such exploits his Hercules-head is in a somewhat befogged condition, as described in the amusing hymn x. 119 (Geldner and Kaegi); or that he staggers about at the sacrificial feast, tottering like a boat in the water (ii. 16. 7), and receives the honorable title *vithuro astar*, 'the reeling archer' (viii. 85. 2).

Indra and Brhaspati (Brahmanaspati).—Indra's union with Brahmanaspati, 'the lord of prayer,' furnishes an excellent parallel or companion-piece to his alliance with Soma, and is similarly explainable: i. e. not from any common features of original nature-myths, but as the product of conscious deliberation. Indra is joined with Soma for a purely physical, with Brahmanaspati for a purely moral reason. Since the latter union is of no significance for Indra's nature, I content myself with quoting a paragraph from an essay by Roth entitled "Brahma and the Brahmins," in Z. D. M. G. i., which illustrates the

same development of ideas in the legends concerning Brahmanaspati which we found in the fables relating to Soma. "The request which occurs oftenest in the hymns (of the Rig-Veda), and is directed to Indra, is the prayer that he will oppose the machinations of the cloud-demon, who threatens to carry off the fruitful rains of heaven, or holds them already imprisoned in mountain-caves; that he will pour out the waters, fructify the earth, and bestow sustenance upon man and beast. If, as his name denotes, the nature of the god Brahmanaspati really expresses the victorious power of devotion, then we must find him in this myth-cyclis oftener than elsewhere. He actually appears by Indra's side in the battle against the wicked one; and in such a manner that to him is attributed a portion of the work which in the majority of other hymns devolves entirely upon Indra. And finally, in a few rare passages it is he alone who breaks open the caves of Bala, to bring to light the hidden treasures of the fructifying water: i. e. in the allegorical expression, the rich milch-cows." Roth then quotes ii. 24. 3, 4, according to which verses Brhaspati alone opens the caves by means of *brahman*, 'prayer,' just as Indra does with the thunderbolt.

The only entire hymn directed to Indra and Brhaspati, the 49th in Book iv., contains simply invocations of very general nature and invitations to the sacrifice, and offers little that is explanatory of the relations between the two deities. They are besought for wealth, especially for horses, and invited to get drunk, as is their favorite custom—a fine occupation for the "lord of prayer!" The verses of vii. 97 are mostly directed to one or the other of the two gods, but offer equally little. In v. 9 we read: "Help along our prayers, awake in us wisdom, make powerless our enemies and the evil-doings of our opponents." We find them called conquerors of human enemies in viii. 85, 15: "Indra with Brhaspati for his companion defeated the impious advancing nations." In i. 18. 4, Indra appears with his physical as well as his moral ally: "Whatever mortal Indra, Brhaspati, and Soma support, that hero receives no hurt."

Indra and Gandharva.—In view of the ideas contained in x. 139. 4, 6, I have preferred to discuss the relations between Indra and Gandharva at this point in my essay, although other views, almost diametrically opposed (found e. g. in viii. 1. 11; 66. 5; ix. 83. 4), might induce the belief that Gandharva should be classed with the enemies of Indra. Yet both sides of his character are easily explainable from one and the same ground-thought.

¹ *vīṣo ádevīr abhy ácárantīr bṛhaspátinā yujéndrah sasāhe.*

Gandharva is not the rainbow, as Roth at first supposed, in which he was followed by Grassmann; but rather the genius of the moon, as the discussion of him in the Pet. Dict. plainly shows. He dwells in the sky, or in the broad air, and is guardian of the heavenly Soma, by which is signified as well the actual Soma, brought into mystical connection with the moon, as the heavenly waters typified by this figure. Since now Gandharva watches over the Soma, or rain, a twofold conception develops itself: either, as guardian of the waters, he withholds them from mankind, and must therefore be brought to terms by Indra; or else it is Gandharva who protects the Soma, or rain, from capture by the demons, and reveals their hiding-place to Indra when the latter seeks them. The second of these conceptions is found e. g. in x. 139. 4.¹ The third pāda has either one or two syllables too many. Grassmann removes *indrah*; I prefer to reject *āsām*, and to read *indra* in three syllables, as is frequently necessary. I would also read *somagandharvām* as a compound. "The waters, when they had perceived the Soma-Gandharva, in whose possession lies all wealth, flowed out then in the right channel (i. e. down to earth); when Indra, hastening toward them, discovered them, then he perceived the veil of the sun" (i. e. the halo around the sun); v. 6.² "He (Gandharva) found the victorious (Indra) in the track of the streams; he opened the gates for those that were imprisoned in the rocks; Gandharva revealed their nectar (i. e. told Indra their whereabouts), and Indra made trial of the dragons' powers."

The opposite conception finds expression, as already stated, in viii. 1. 11; 66. 5; ix. 83. 4. Here Gandharva is guardian of the Soma, or rain, and Indra compels him to surrender it. Thus, viii. 1. 11:³ "(I invoke Indra) in order that he urge on the sun's steed and the two galloping winged horses of the wind; in order that he of hundred-fold courage may drive to Kutsa Ārjuneṃya; in order that he may surprise the unconquered Gandharva;" 66. 5:⁴ "Indra pierced Gandharva through in the fathomless air, to the joy of his worshippers;"

¹ *viçvāvasuḥ soma gandharvām āpo dadṛçúṣis tād ṛtēnā vy āyan: tād anvāvaid indro rārahāpā āsām pāri sūryasya paridhīr apaçyat.*

² *sāsnim avindac cāraṇe nadīnām āpāvṛṇod dūro āçmavrajānām: prāsām gandharvō amṛtāni vocad indro dākṣam pāri jānād ahīnām.*

³ *yāt tudāt sūra étaçam vañkū vātasya parṇinā: vāhat kútsam ārjune-yām çatākṛatus tsarad gandharvām āstṛtam.*

⁴ *abhi gandharvām atṛṇad abudhneṣu rājāḥsv ā: indro brahmābhya id vṛdhé.*

ix. 83. 4: 'Gandharva protects his (Soma's) abode; invisible he guards the creatures of the gods; the holder of the net (Indra: cf. A. V. viii. 8. 5 ff.) catches the enemy (Gandharva) with his net; the most pious ones achieved the enjoyment of the sweet drink." Although this last verse is susceptible of different explanations, the comparison with the others quoted seems to point to the interpretation here given.

Indra and Agni.—The hymns to Agni in the Rig-Veda are surpassed in number only by those to Indra; and no two divinities are so often associated. Yet the verses which thus combine them throw very little light on Indra's nature.

Agni, as god of fire in general, naturally manifests himself in all the different appearances of that element—which being threefold, his nature is likewise threefold. He is god of the fiery element in the sky, and in this quality appears associated with Varuṇa, particularly as divider of day and night: i. e. he is the sun; as lightning, he presides over the fire in the atmosphere, and stands at Indra's side in all exploits of the latter which belong in this sphere; and finally, he is god of the fire upon earth, preëminently of the sacrificial fire, and hence is chosen as the messenger to invite and conduct the gods to the sacrifice, or else to convey the offering to them on high.

In these conceptions of Agni's character lay a double reason for associating him with Indra: a general reason, for which the messenger between men and gods exercises his functions oftenest for the most lauded and honored deity, Indra; and a more special one, according to which Agni, god of the lightning, the fiery element in the atmosphere, which is indispensable to Indra's victory over Vṛtra, naturally stands as ally at Indra's side. To the one or the other of these views nearly every conception of the alliance between Indra and Agni may be traced back. It is remarkable how Agni is everywhere subordinated to Indra; as in fact the other gods lose a great part of their import-

¹ *gandharvá itthā padām asya rakṣati pāti devānāṃ jānimāny ādbhutaḥ: gr̥bhṇāti ripūṃ nidhāyā nidhāpatiḥ sukṛttamā mādhuṇo bhakṣām āçata.*

² The two verses vii. 6. 1—"I praise the deeds of him that is mighty as Indra"—and viii. 63. 10—"Thou Lord similar to Indra"—are really no contradiction of this statement; for other verses show conclusively that such glorifications of Agni spring merely from the poet's fancy. In general, the Vedic poets seem to have regarded a comparison with Indra as the highest praise possible to be bestowed upon another divinity. Pūṣan is called *indro na sukratuḥ*, vi. 48. 14; Manyu, *vijeshakṛd indra iva*, 'victory-giving like Indra,' x. 147. 5. Pedu's mighty horse is *carkṛtyam indram iva*, 'glorious as Indra,' i. 119. 10. In x. 173. 2, the poet compares a king, in 166. 2 himself, to Indra. The Aṅvins and Uśas are styled *indratamā*, generally rendered 'most like Indra' (i. 182. 2, vii. 79. 3); per-

ance when they appear in the society of the mighty thunderer ; Varuṇa alone can claim anything like equal rank with Indra, and subsequently even he endures the comparison none too successfully.

Several passages relate that Indra created Agni : so e. g. ii. 12. 3,¹ where we have to understand the use of the lightning in the battle with the demons, in the atmosphere between heaven and earth. The expression is then transferred, with mystical intent, to the birth of Agni upon earth : x. 45. 3 :² "In the sea (of air), in the waters, in the udder of the sky (i. e. in the cloud : cf. iii. 1. 9), did he who is friendly to men, who looks upon men (i. e. Indra : cf. passages quoted in Pet. Dict. s. v. *nṛmanas*), produce thee." Grassmann's reference of this passage to the lightning is undoubtedly correct. This seems to contradict the statements of vi. 59. 2, as quoted in Part II., p. 130 ff. And in fact the two verses are hard to reconcile—which is the less wonderful, as the conceptions of Agni's origin are in the highest degree uncertain and wavering, and evidently formed to accord with the phenomena of his appearance under widely different circumstances. Agni as a power of Nature, and Agni as this or that form of fire, have very different origins.

Agni's character as a priest or messenger to the gods at the sacrifice (since the offerings were consumed by the fire) is illustrated by the following passages : v. 5. 3 :³ "When honored, O Agni, bring hither the brilliant beloved Indra" (*citrām* might also be construed as a predicate adjective, in the sense of 'visible'); iii. 53. 4 :⁴ "As often as we press the Soma, may Agni run to thee as messenger." Likewise iii. 35. 9 : "Drink the Soma, Indra, by means of Agni's tongue" (cf. v. 10). Agni's tongue is the flame, into which the Soma for Indra is poured, and which stretches itself toward the sky. So also v. 51. 2, *et saepp*. The verse viii. 38. 1, if taken literally, would present a view not found, so far as I know, in other passages :⁵ "Be the priests of this sacrifice, Indra and Agni, for ye are victorious in battle and in sacrifice." The meaning probably is : Ye are the real priests ; men alone, without your help, have

haps 'most rapid' were better (cf. above in Part I.); since in iv. 43. 3 the rapidity of the Agvins is likened to that of Indra. In fact, the word *indrataṃ* may be an intentional pun.

¹ yó ācmanor antár agnín jajāna.

² samudró tvā nṛmānā apsv antár nṛcákṣā idhe divó agna ūdhan.

³ ūtíto agna ā vahéndraṃ citrám ihá priyám.

⁴ yadā kadā ca sunāvāma sómam agniḥ tvā dūtó dhanvāty ácha.

⁵ yajñāsya hí sthā ṛtvijā sāsni vājeṣu kármasu : indrágni táśya bódhatam.

no power whatever. Strictly taken, only Agni is the priest. But we have here doubtless still another instance of the extension of an attribute which really belongs to only one of a pair, so as to apply to the other as well. Other well-known examples of this poet's license are *pītarā* and *mātarā* for the two parents, *dyāvā* for heaven and earth, etc.

The other side of Agni's character, according to which he appears as the fire of lightning, explains at once his connection with Indra in the battle of the thunderstorm, and the circumstance that both are invoked together as general helpers in battle, more especially in battles against non-Aryans, and as bestowers of war-booty and all sorts of riches. The process of development is here quite the same which we discovered in the case of Indra-Soma, Indra-Bṛhaspati, etc.: so soon as, for any reason, any divinity is associated with Indra in his battle for the rain, the motive is furnished for connecting him with Indra in all manifestations of the latter's activity.

Indra and Agni occupy the same chariot, especially when going to sacrifices on earth. Thus, i. 108. 1: "With your most splendid wagon, Indra and Agni, which looks upon all creatures, come hither together in the wagon, and drink of the pressed Soma;" v. 3: "Ye have united your friendly persons, ye are yourselves united, O ye Vṛtra-slayers; after seating yourselves in company, O Indra and Agni, pour down, O strong ones, the strong Soma."

In verse 4 of i. 109, *aṇvinā* are invoked and besought to make the herbs palatable for the second pressing: "Ye *aṇvinā* (i. e. 'horse-possessors'), with luck-bringing, skilful hands, rinse them (the herbs) and steep them in water with mead"(?)—i. e. that the herbs after being steeped in water may yield juice a second time. Myriantheus's exegesis of this verse deserves notice for its extraordinary absurdity (*Aṇvins*, p. 147): "That the lightning was conceived as a being with a horse's head, or as a horse, is seen from i. 109. 4 and vii. 1. 12, where Agni, the lightning, and Indra, are called *aṇvinā*, or Agni alone *aṇvī*, 'furnished with horses' or 'horse-tamer.'" But 'horse-guider' is a perfectly satisfactory translation of the epithet used here; and Myriantheus's conclusion of the "being with a horse's head" is extremely strained and altogether unnecessary. Indra and Agni are called *aṇvinā*, not because they have lightning at their disposal, but simply because the

¹ yá indrāgni citrātamo rátho vām abhí víḡvāni bhūvanāni cāṣṭe: ténā yātam sarātham tasthivāṁsāthā sōmasya pibatam sūtāsya.

² cakrāthe hí sadhryān nāma bhadrah sadhricinā vṛtrahanā utā sthah: tāv indrāgni sadhryāñcā nisādya vṛṣṇaḥ sōmasya vṛṣṇā vṛṣethām.

³ tāv aṇvinā bhadrahastā supāpi ā dhāvatam mādhunā prāktām apsu.

poets imagined them as driving. Besides, it is not even certain that Indra and Agni are here intended by *açvinā*. For in v. 3 the *vr̥ṣanah* (the busy Soma-pressers) are mentioned as laboring for Indra and Agni; and in v. 4 the epithets *bhadra-hastā* and *supānī*, and the work they are exhorted to undertake, suit the pressers so well that only the dual number prevents our referring *açvinā* to them, since the press-stones are often compared to steeds. Thus Grassmann *ad loc.* If then *açvinā* here really refers to Indra and Agni, I can only explain the verse as follows: The gods for whose benefit the sacrifice is begun are besought to interfere in the process and watch over the details, that no mistake be made.

A few passages will suffice to illustrate the part played by Agni in the Vr̥tra-battle. Thus, iii. 12. 6: "Indra and Agni, by one act ye shattered all at once the ninety demon-ruled forts." Cf. i. 109. 7, 8 (*purāṇḍarā*, *vajrahastā*, *vajrabāhū*). In i. 59. 6, Agni himself is called slayer of Çambara. Further, viii. 40. 5: "Arrange the prayers after Nabhāka's fashion for Indra and Agni, who opened the sea (in the air) with its seven bottoms, which was turned mouth downward." (†) Cf. also v. 8. In the following, Agni's subordinate position is emphasized: v. 29. 7: "The friendly Agni roasted gladly three hundred bullocks for his friend; Indra drank the Soma, pressed by mortals, in order to slay Vr̥tra, three lakes full at once." Agni himself says in x. 52. 5: "I procure for you, O ye gods, immortality and an abundance of heroes, that I may present you with freedom; I will put this lightning into Indra's hands, and then he will win all these battles." And as Indra through his victory recovers light as well as rain, so we find Agni of assistance in this labor also: vi. 60. 2: "Win back for us now, O Indra and Agni, the cows, the light, the dawns that were led astray; thou, O Indra, yokest for thyself the quarters of heaven, the light, and the many-colored dawns; and thou, O Agni, the waters, the cows, as a team;" iii. 12. 9: "O Indra and Agni, ye have by the battle restored to order the light-regions of the sky."

A further extension of the functions of both gods makes of them demon-killers in general, exactly as was the case with

¹ indrāgniṁ navatīm pūro dāsapatnīr adhūnutam: sākām ékena kármanā.

² prá bráhmāṇī nabhākavád indrāgnībhyām irajyata: yā saptábudhnam arjavám jñmábāram aporutáh.

³ sākha sákhye apacat túyam agnir asyá krátvā mahiṣá trí çatāni: trí sākām indro mānuṣaḥ sárāṇsi sutám pibad vṛtrahátyāya sómam.

⁴ á vo yakṣy amṛtatvám suvīram yáthā vo devā vāriṣaḥ kārāṇi: á bāhvōr vájram indrasya dheyām áthemā víçvāḥ pṛtanā jayāti.

⁵ tā yodhiṣṭam abhí gā indra nūnám apāḥ svār uṣāso agna ūjhāḥ: díçāḥ svār uṣāso indra citrá apó gā agne yuvase niyútvan.

Indra alone (i. 21. 5; iv. 28. 3), and they are supposed to render assistance against human enemies, and to bestow booty in war and all sorts of riches (vi. 60. 4, 5, 6; 59. 9; v. 86. 4; iii. 12. 4; i. 109. 1, 2, 5, 8; vii. 93. 2; viii. 40. 4).

The verses v. 2. 8 and x. 32. 6 contain fragments of a curious fable, for which I can find no parallel in the Rig-Veda, unless the 6th verse of v. 2—in which Agni is said to be kept prisoner by the wicked, and Atri's songs shall free him—may be combined with the 8th verse. The passages are as follows: v. 2. 8: ' "In anger didst thou depart from me, the law-watcher of the gods revealed it to me; Indra knew, for he discovered thee; instructed by him, O Agni, I came hither;" x. 32. 6: ' "The law-watcher of the gods revealed to me him who was hidden and concealed in the waters," etc. (as in v. 2. 8). One at once thinks of the fable in Book x., according to which Agni, weary of his unending sacrificial duties, takes to flight, but is reinstated by the gods after Yama has discovered his hiding-place: cf. x. 51 and 52. According to Tāitt. S. ii. 6. 6' (see Muir S. T. v. 203), a fish betrayed Agni's place of concealment. The fish was evidently made the betrayer because the fugitive deity lay concealed in the waters. May not a similar conception have made Indra his discoverer? By "water" we may, in the Veda, generally understand either or both of two things, the waters of the atmosphere and those of the earth, which the poets intentionally confused time after time, for the purpose of imparting a mystical tone to their hymns, so that a distinction is often quite impossible. Accordingly, when we read that Agni hid himself in the water, by which one poet meant the terrestrial waters, and that a fish, as the animal which dwells in the water and hence is supposed to observe whatever goes on there, betrayed him, it is self-explanatory how another poet, who by "waters" meant those of the firmament, should have related that Agni was discovered and betrayed by Indra; for Indra was in the highest degree concerned about the heavenly streams. According to yet another version it was Yama who spied him out; the change of names shows that the person of the discoverer was a more or less arbitrary invention.

Indra and Viṣṇu.—Viṣṇu is the all-quickening, all-preserving sun-god. He strides with three steps over earth, atmosphere, and heaven; and where his highest step falls the gods dwell. He bestows prosperity and fruitfulness; and in order that nature may subsist in undisturbed regularity, he props up

¹ hr̥ṇīyāmāno āpa hí mād āīyeḥ prá me devānāṃ vratapā uvāca: índro vidvān ānu hí tvā cacákṣa tēnāhām agne ānuṣiṣṭa āgām.

² nidhiyāmānam āpagūlham āpsú prá me devānāṃ, etc.

firmly both heaven and earth. As god of fruitfulness he is associated with Tvaṣṭar and Pūṣan. Yet, as we have seen already, the orderly progress of natural life is constantly threatened or even arrested by evil spirits, whom it is necessary to subdue, so that Viṣṇu must assume the character and functions of a demon-slayer. But other deities perform a similar office—Indra and the Aṣvins exert themselves to ensure the eternal change of day and night, and the regular flow of rain upon earth; and naturally Viṣṇu is often associated with them. He is oftenest mentioned in connection with Indra, the demon-slayer in chief; and in the same subordinate position in which we have hitherto discovered all the companions of the mighty thunderer. Viṣṇu offers Indra the Soma, or is sometimes sent by Indra into the fight alone, in which case the latter imparts to him the requisite strength and courage. Again, he stands side by side with Indra, who bids him withdraw somewhat, to give free room for brandishing the thunderbolt (iv. 18. 11; viii. 89. 12: differently explained by Müller, R. V. Transl., i. 85. 7, note 2).

How Indra and Viṣṇu fight in company for the preservation of order in the universe will be best seen from a few extracts. Thus, Vāl. 4. 3 (cf. above, p. 153): "(Indra,) who receives the prayers for himself alone; who boldly drinks the Soma; for whom Viṣṇu took his three steps, according to the decrees of Mitra." In viii. 12. 27 Viṣṇu does this through Indra's might. Again, vi. 20. 2: "To thee the gods yielded as it were the whole dominion over the sky, when thou, O impetuous one, allied with Viṣṇu, didst slay the dragon Vṛtra, who enveloped the waters;" vii. 99. 4: "Ye procure free scope for the sacrifice, by making sun, dawn, and fire shine out; ye have brought to naught the wiles of the demon Vṛṣaṇipra, O ye heroes;" v. 5: "Indra and Viṣṇu, ye have broken open the nine and ninety firm forts of Čambara, and have overwhelmingly beaten the hundred and the thousand warriors of the Asura Varcin all together." Viṣṇu uses the same specific to acquire courage which Indra employs: vi. 69. 2: "Indra and Viṣṇu, ye who evoke all prayers, ye two Soma-casks." In v. 6 they are styled "a sea" of Soma: cf. also v. 5.

The same extension of functions which we have already

¹ divó ná túbhyam ánuv indra satráśuryāṁ devébbhir dhāyī víçvam: áhīn yád vṛtrám apó vavrivāṁsam hánn ṛjīṣīn víṣṇunā sacānāḥ.

² urūm yaññāya cakrathur u lokān janāyantā sūryam uśāsam agnīm: dāsasya cid vṛṣaṇiprāsya māyā jaghnāthur narā pṛtanājyeṣu.

³ indrāviṣṇū dṛhītāḥ čámbarasya náva pūro navatīm ca çnathīṣṭam: çatām varcināḥ sahāśram ca sākām hathó apraty ásurasya vírān.

⁴ Cf. the German *Altes Bierfass*, and Goethe's "*Altes Weinfass*" (Faust).

often met with, when demon-slayers become general protectors and givers of wealth, is to be found here also. Indra and Viṣṇu are called *abhimātisāhā*, 'conquerors of the attackers,' vi. 69. 4. In i. 155. 2: "The Soma-drinker escapes the fierce conflict with you mighty ones; ye are they who turn aside from mortals the aimed arrow of the bow-stretching archer." Cf. vi. 69. 1.

A curious reference is made to Indra and Viṣṇu in vi. 69. 8, according to which they "divided the thousand-fold into three parts." I can find no explanation for this, unless by the "thousand-fold" the universe be signified, which Indra and Viṣṇu might be said to have divided into three parts, i. e. heaven, atmosphere and earth, by restoring order to the disturbed course of nature.

Another difficult allusion occurs in i. 61. 7.¹ Grassmann translates thus: "As soon as strengthened by the juices of his mother, when he had gulped down the drink, the noble food, he, energetic and victorious, stole the bright-flamed, and hit the boar, shooting over the rocks." What Grassmann understands by "the bright-flamed" he does not say; in his dictionary he takes *pacatam* much more correctly as neuter, 'cooked food.' The words *mātuh savaneṣu sadyo* are, according to him, equivalent to "while he yet subsisted on mother's milk;" and *viṣṇuḥ* is an adj., 'energetic,' and referring to Indra. On this point he agrees with Benfey, who renders the verse as follows (Orient and Occident, i. 583): "Hardly had the strongest hero gulped down the drink and the excellent food at the sacrifice, when he stole from the workman that which was to be made glowing, and smote the boar, piercing him through with the bolt." In a note Benfey adds this remarkable explanation: "According to my notion the sense is: Hardly had Indra refreshed himself upon the sacrificial offering, when he stole the thunderbolt made by the celestial workman, and smote Vṛtra. We receive here a new moment for the mythical conception of Indra, by which he links himself with the lightning-stealing Prometheus (cf. Kuhn, *Herabkunft des Feuers*, p. 17); *pacatam*, Vedic part. fut. pass.: lit'ly, 'that is to be set boiling,' i. e. the thunderbolt, which must be made glowing hot before use." Against this speak several considerations. 1. The syntactical union of *mātuh-mahāḥ-pacatam* is very bold, on account of the order of words. 2. The accent of *māt'uh* is an obstacle, since the word, if a genitive or ablative from *mātar*, 'carpenter,' would be necessarily accented on

¹ *asyéd u mātúh sávaneṣu sadyó mahāḥ pítum papivāñ cārv ánnā: muṣāyád viṣṇuḥ pacatām sáhlyān vídhyad varāhám tiró ádrim ástā.*

the first syllable.' 3. The meaning 'that is to be made hot' for *pacatam* is quite indefensible, first on account of the form of the word, and secondly because *pac* does not mean simply 'heat,' but specifically 'cook over the fire,' and is used of food only. A "cooked" thunderbolt would have rendered Indra invaluable assistance in the conflict with Vṛtra, who showed no vulnerable parts!

Possibly viii. 66. 10 may instruct us how to render *pacatam*.¹ In this verse, *indra* (i. e. *indrah*) is certainly a mistake; *tvéṣitah* (= *tva* + *iṣitah*) shows that the vocative *indra* must originally have stood here, which is also indicated by the fact (acknowledged by Grassmann) that vv. 10 and 11 form a separate fragment, originally addressed to Indra. The collector or editor took exception to the inconsistent deviation from *sandhi*-rules in the case of the voc. *indra*—a deviation which was justified by the Vedic usage of metrical pronunciation—and corrected to *indra*, in the *pada*-text *indrah*. Grassmann translates as though he had likewise read *indra*, but makes no mention of it in the notes. The meaning would then be as follows: "All this the far-stepping Viṣṇu, sent out by thee, brought back—a hundred bullocks, a porridge cooked with milk, and a destructive boar, O Indra:" *oduna* here = *pacata*.

In i. 61. 7, the words *savaneṣu* to *annā*, inclusive, seem to form a parenthesis, and we might translate as follows: "After he had swiftly and with joy drunk the draught and (eaten) the acceptable food at the Soma-feast, Viṣṇu, who was superior in strength, stole from that one's mother the porridge; he smote the boar, hurling the stone through him." Still, this neither explains the verse completely nor interprets the mythus. Unfortunately the story does not recur in the Rig-Veda. Both verses lack all connection with the others of their respective hymns, unless perhaps in viii. 66 the verses 10 and 11 form a strophe. From these two passages alone the original form and signification of the mythus are quite unrecognizable.

Indra and Tvaṣṭar.—The Rig-Veda offers the following for the relations between Indra and Tvaṣṭar. 1. Tvaṣṭar, the general workman and artist among the gods, prepares the thunderbolt for Indra: i. 52. 7: "Tvaṣṭar increased the power which resided in thee, he forged the thunderbolt of overwhelming

¹ Pet. Dict. s. v. *mātar*: "The reference might be to Vṛtra's mother."

² *vīqvét tā viṣṇur ābharad urukramás tvéṣitah: qatám mahiṣān kṣātra-pākám odanám varāhám indra emuṣám.*

³ *tvāṣṭa cit te yújyam vāvṛdhe qávas tatákṣa vájram abhíbhūtyojasam.*

force;" vi. 17. 10:¹ "Then, O mighty one, did Tvāṣṭar turn out for thee swiftly the thousand-pointed, hundred-edged thunderbolt, the eager, obedient (thunderbolt), wherewith, O impetuous one, thou didst crush the bellowing dragon." Cf. x. 48. 3; i. 61. 6. For the doubtful verse i. 61. 7, see the preceding section.

2. Indra overpowers Tvāṣṭar and drinks up his Soma: iv. 18. 3:² "In Tvāṣṭar's house Indra drank from the vessels the pressed Soma, of the value of a hundred (cattle?);" iii. 48. 4:³ "Mighty, rapidly conquering, of overpowering might, Indra changed his person as he would; after as was his wont he had overcome Tvāṣṭar, he seized the Soma and drank it out of the vessels."

Myriantheus, who never abandons the unfortunate belief that each and every fable concerning a god is explainable as a natural mythus, i. e. referable to some event in nature, explains this violent proceeding in the following not less violent manner (*Açvins*, p. 146): "Tvāṣṭar is creator of heaven and earth and of all creatures, and in his house, as we read, was the Soma, which Indra drank after Tvāṣṭar had been overcome. This Soma can not but be identical with *madhu*, as indeed Soma is often called *madhu* (see x. 49. 10, and Kuhn's *Herabkunft* etc., p. 155 ff.). From this, and from what was proved above concerning the meaning of *madhu*, the Soma which Indra drank in the house of Tvāṣṭar, creator of all things, can only be the rain, which he takes from Tvāṣṭar's dwelling and sends down to his worshippers."

But we can not spring so lightly over such real difficulties. Let us observe the two passages more carefully. Neither has a word about sending the Soma down to the worshippers: on the contrary, Indra drinks it solely for his own pleasure. Moreover, in the first half of iv. 18. 3 reference is made to Indra's violence toward his mother; and if we allow any connection between the two halves of the verse, we are constrained to admit that the similar nature of the actions mentioned respectively in both was the reason for their combination in

¹ ādha tvāṣṭā te mahā ugra vājraṁ sahāsrabhṛṣṭiṁ vavṛtac chatāgrīm: nīkāmaṁ arāmapasaṁ yēna nāvantaṁ āhiṁ sām pipāç rjāṇin.

² tvāṣṭur gṛhē apibāt sōmam īndraḥ çatadhanyāṁ camvōḥ sutāsya.

³ Ludwig translates as follows (*Die philosoph. u. relig. Anschauungen d. Veda*, p. 31): "He looks upon his dying mother: 'I will not refuse to yield to him, I will follow him;' [Indra now breaks into Tvāṣṭar's house, to procure Soma for his dying mother, and kills Tvāṣṭar's son] in Tvāṣṭar's house Indra drank Soma of hundred-fold value, from the two vessels of juice." I confess my inability to comprehend this.

⁴ ugrās turāṣāḥ abhībhūtyojā yathāvaçāṁ tanvāṁ cakra eçāḥ: tvāṣṭāram īndro janūṣābhībhūyāmūṣyā sōmam apibac camūṣu.

one stanza. Now comparing iii. 48. 4, we perceive that the appropriation of Tvastar's Soma was an act of pure violence, as is indicated by the occurrence of *abhi-bhū* twice. This accords well with the whole hymn iii. 48, which treats of Indra's extraordinary fondness for the Soma, and his dependence upon it for his strength, so that he seizes upon it greedily the very moment after his birth. In every verse except the 5th, which consists merely of invocations, mention is made of his Soma-drinking, and no reason exists for taking the word *soma* in vv. 1-3 in any but the usual sense: why then all at once in v. 5 in the signification of "rain?" Similarly iv. 18, as far as its unity extends, consists largely of references to Indra's violent and headstrong nature. For this reason doubtless the collectors placed the 3rd verse among the others, well-knowing that no deed of especial friendliness to mankind was commemorated by it.

Myriantheus's theory moreover involves him in a contradiction. What has Tvastar to do with the rain? If Indra robs him of the waters, to bestow them upon mankind, then Tvastar must have detained them by force, which would make him an enemy of gods and men—a conception of his nature utterly at variance with that otherwise entertained. For Tvastar fashions the thunderbolt for Indra, that he may conquer the rain-stealing demons. It is undoubtedly true that *madhu* often signifies the sweet Soma, and is often metaphorically transferred to the rain; but in iii. 48. 4 *madhu* does not occur, and we have no right to explain *soma* there of the rain. Besides, the verse x. 49. 10, which Myriantheus quotes to sustain his position, proves nothing for him, since *madhu* there refers not to Soma or the rain at all, but to plain earthly cow's milk. Indra is boasting of his own deeds. Among them was this: "I put into the cows the white milk, which not even Tvastar put into them; into the udders and bodies of the cows the precious, sweet, delicious milk, for mixing' the Soma."

3. Indra causes the death of Tvastar's son Viçvarūpa. This has been discussed in the section "Indra and Trita."

Indra and the Rbhus.—The Rbhus bear nearly the same relation as Tvastar to Indra, being engaged as skilful artisans on his behalf. In most cases no distinction is made between the three, Rbhuksan, Vāja, and Vibhvan. But iv. 33. 9 gives a more detailed account: "Vāja acted as artisan for (all) the gods, Rbhuksan for Indra, Vibhvan for Varuṇa." They build Indra's chariot and fashion his steeds: i. 111. 1: "They, work-

¹ *āçīram*, infin. from *ā + çar = ā + çri*: cf. viii. 6. 19.

² *tákṣan rátham suvṛtam vidmanāpasas tákṣan hári indravāha vṛṣṇavastu*.

ing with intelligence, built for Indra the well-wheeled chariot, they fashioned the steeds which pull Indra and bring with them great riches." The same characteristic of care in their work is emphasized in i. 20. 2:¹ "Those who with right understanding created for Indra the steeds which harness themselves at the word, received for their exertions a sacrifice"—i. e. they were deemed worthy of divine honors; before this, so the story runs, they had not been considered as actual divinities. We read in v. 31. 4:² "The Anus prepared the chariot for thy steed." *Anu*, an appellation of a non-Aryan race,³ seems to indicate that the R̥bhus were especially honored by this people, or that the Anus had developed unusual skill in wagon-building.⁴

These relations between Indra and his artificers were the basis of further connections. In iv. 35. 7 we read: "O guider of sorrel steeds, thou hast drunk (alone) in the early morning, and the midday pressing belonged likewise to thee alone; drink now (i. e. at evening) with the wealth-bestowing R̥bhus, with whom thou hast entered into friendship, by reason of thy skill." Cf. iii. 52. 6. Indra himself is styled *r̥bhukṣan* in i. 111. 4; vii. 37. 4; x. 74. 5; and in iv. 37. 5 R̥bhu's strength is compared to Indra's.

Indra as Chief of the Vasus.—The character of the Vasus is so vague, so little developed and individualized, that we shall hardly discover any internal reason for their union with Indra as their chief. Certain passages seem to indicate that the gods were divided into three classes, Ādityas, Rudras, and Vasus; so e. g. ii. 31. 1: "Help our chariot, O Mitra and Varuṇa, joined with the Ādityas, the Rudras, the Vasus." In x. 48. 11 Indra says of himself: "I break not the laws of the gods, of the Ādityas, the Vasus, the Rudras." And x. 66. 3: "May Indra with the Vasus guard our dwelling, Aditi with the Ādityas afford us protection, the god Rudra with the Rudras show us mercy, and Tvaṣṭar with the goddesses help us to prosperity."

I know of but one verse which justifies any conclusion as to the real nature of the Vasus: vii. 47. 2:⁵ "Ye waters, may the son of the waters (Agni) protect your sweet waves, with which Indra together with the Vasus refreshes himself—these (waves)

¹ *yá índrāya vacoyújā tatakṣúr mánasā hárī: çámíbhīr yajñám āçata.*

² *ānavas te rátham āçvāya takṣan.*

³ So Roth, *Pet. Dict. s. v.*; Zimmer, *Altind. Leben*, p. 125, considers them Aryans.

⁴ Perhaps both. The word *anu* is not wholly clear, and perhaps in this passage is used quite appellatively of the R̥bhu.

⁵ *tám ūrmīm āpo mādhumattamaḥ vo 'pām nāpād avatv āquhémā: yás-minn índro vásubhīr mādáyāte tám āçyāma devayānto vo adyā.*

may we receive to-day from you." We might suppose from this that the Vasus were imagined to have played a part in the recapture of the waters; yet other indications of such an idea are lacking. Perhaps the connection between them and Indra is but the product of later schematizing: as Varuṇa was placed at the head of the Ādityas, and Rudra over the Rudras, so also, in lack of a chief for the Vasus, the most prominent among the remaining divinities was chosen. *Vasupati*, used often of Indra, may signify either 'Lord of the Vasus' or 'Lord of Riches'—in most cases doubtless the latter; and perhaps the name, at first used in the latter sense, gave rise by its very ambiguity to the idea that Indra stood in near relations to the Vasus.

Indra's battles with human enemies.—It was so natural for Indra, the mighty warrior of the atmosphere, the doughty conqueror of demons, the fighter *par excellence* and ideal of a warlike hero among the gods, to advance to the position of the war-god, that the mere quotation of several significant passages will render unnecessary any more detailed comments. The verses which I shall here adduce might be classified with equal right with those which yield information concerning Indra's relations with his worshippers; but I have preferred to introduce them here, that we may have the portrait of Indra as a warrior complete before our eyes, ere turning to the results of his battles, in which he appears as a cosmogonic power, a god of benevolence, etc.

The most general conceptions offer themselves in such passages as ii. 30. 10: 'Together with our warlike heroes, O hero, perform what deeds thou hast to perform; long have (the enemies) been puffed up; smite them and bring us their possessions;' iv. 16. 17: 'In the moment when the sharp weapons of men are flying about, when the dreadful shock occurs, then, O faithful hero, then be thou protector of our bodies.' Cf. also the other verses of the same hymn, and vii. 31. 3, 6.

But Indra enters into yet closer alliance with mankind—he becomes, like other gods, especially Agni and the Aṣvins, the especial guardian of the Aryan races, who regard him as their exclusive national property, and their champion against the aboriginal inhabitants of the Indian country which they overrun. These aborigines seem often to have been viewed rather as devils than as men; they are styled *dasyu* and *dāsa* (see Zimmer, p. 109 ff.). Muir, S. T. v. 113, has collected the

¹ *asmākebhīḥ sātva bhīḥ cūra cūrāir vīryā kṛdhi yāni te kṛtvāni: jyōg abhūvann ānūdhūpitāso hatvī tēṣāṃ ā bharā no vāsūni.*

² *tigmā yād antār aṇānīḥ pātāti kāsmin cīc chūra muhukē jānānām: ghorā yād aṛya sāmṣtīr bhāvāty ādha smā nas tanvō bodhi gopāḥ.*

verses most significant for this side of Indra's character. Thu i. 103. 3: "Bearing the thunderbolt (? thus Sây.), and confident in his strength, he strode on ahead, breaking down the hostile (*dāsīh*, fr. *dāsa*, 'demoniac') forts; O thunderbolt bearer, hurl thy weapon with skill against the Dasyu, augment the strength and glory of the Aryans, O Indra." Cf. i. 130. 8 iv. 26. 2; vi. 18. 3; viii. 14. 15; 24. 27; x. 49. 2. In the following verse Indra's assistance is very significantly alluded to i. 131. 5: "They praised this thy deed of valor, O giant, thou in thy drunkenness didst help the suppliants, didst help those who sought after alliance with thee; for them thou didst make (i. e. didst inspire them with) a battle-song, to their victory in the battle; they that were on the march gained on stream after another" (*sanīṣṇata*, intens., expressing a repetition of the action).

The verse is of peculiar interest, in that it mentions the assistance lent by Indra to the Aryans during their wandering through the Punjab toward the south and east, and the gradual occupation of the peninsula. The *çravyāntaḥ* are those engaged in the migration.¹ The Vedic Indians led a life half nomadic, half settled, and the older parts of the Veda date from the time of their slow progress to and across the Indus valley, and into the interior of Hindustan.

Jealousy and enmity between neighboring tribes of the same race was a very ancient trait of Indo-European character, which in many instances has remained undiminished to the present day. The Greeks presented, in spite of their close relationship, an example of the most constant quarreling; and in late times Germanic tribes offer the same spectacle. That the Indians were not only not free from such a "particularism," but even infected with it to the greatest extent, is evident from the post-Vedic history of the Indian peninsula, where no unit of Indian rule ever grew up, the land being split up after the fashion of Germany and Italy into countless little sovereignties and duodecimo principalities. Tribe fought against tribe, clan against clan, community against community; and in all such contests each party sought to gain Indra's help for itself, and was at great pains to allure the god by enticing promises from an alliance with others to their own. See particularly the

¹ *sá jātūbarmā çraddādhāna ójaḥ puro vibhindānn acarad ví dāstīḥ vidvān vajrin dāsyave hetīm asyāryaḥ sāho vardhayā dyumnām indra.*

² *ād it te asyā vīryāsa cakīran mādēṣu vṛṣann uñño yād āvitha sa khīyatō yād āvitha: cakārtha kārām ebhyaḥ pñtānāsu prāvantave: t anyām-anyām nadyām sanīṣṇata çravyāntaḥ sanīṣṇata.*

³ This passage speaks strongly against Grassmann's explanation of *çravyāntaḥ*; see his Dict.

hymn iv. 24. I quote some passages in illustration : iv. 30. 18 (Geldner and Kaegi) : "Thou didst smite the Aryans from the Sarayu, Arṇa and Citraratha, both in one day ;" vi. 22. 10 :¹ "Bring hither to us, O Indra, that we may conquer our enemies, that great never-ceasing assistance, whereby, O thunderer, thou didst put to flight barbarian and Aryan enemies and the neighboring clans." Cf. vi. 33. 3 ; 46. 8 ; viii. 52. 7.

We have in the different allusions to Kutsa and his relations with Indra a most instructive example of these quarrels. Kutsa Ārjuneya, a celebrated ṛṣi of ancient times, stood on terms of the closest intimacy with Indra. They ride upon the same chariot (vi. 20. 5), with the steeds of the wind (i. 174. 5 ; 175. 4) ; and Indra kills the demon Ḍuṣṇa as an especial mark of favor to Kutsa, and steals, again for him, one wheel from the sun's chariot (i. 175. 4 ; iv. 30. 4) ; or, as v. 29. 4 relates more circumstantially, takes away one wheel indeed, but leaves the other in place, that the sun's progress may not be altogether arrested. By far the greater number of passages exhibit this view. But in others we discover a conception exactly opposed to this. Thus, i. 53. 10 : "Thou, O Indra, didst give Kutsa, Atithigva, and Āyu into the hand of the great young king (Succravas) ;" and similarly Indra deserts him according to ii. 14. 7 ; iv. 26. 1 ; vi. 18. 3 ; and even kills him (Vā. 5. 2). The verse x. 38. 5 contains a curiously worded prayer : "Break loose from Kutsa, and come hither ; why sits one of thy greatness as though bound fast by the testicles ?" In like manner Indra, who usually takes sides with the (non-Aryan ?) heroes Turvaṇa and Yadu, is in vii. 19. 8 entreated to kill them. Such differences are easily explained, when we consider how many scores of authors have left memorials of themselves in the Veda, from the fact of continual petty warfare between tribes of kindred race, who nevertheless presented upon occasion a solid front to the alien foe.

Indra and Parvata.—On account of the prayers which they contain, I introduce the following verses here. Parvata is doubtless, as Roth supposes, a genius of the mountains, and at the same time ruler of the clouds. Further than this, his character can hardly be determined with certainty. Thus, i. 122. 3 :² "May the wanderer, the early battler, make us rejoice ; may the wind, which accompanies the waters, make us rejoice ; Indra and Parvata, bestow presents upon us ; may all

¹ ā saṁyātām indra naḥ svastīm cātutūryāya bṛhatīm āmṛdhrām : yāyā dāsāny āryāṇi vṛtrā kāro vajrint sutūkā nāhuṣāṇi.

² Doubtless a proverbial expression.

³ mamātu naḥ pārijmā vasarhā mamātu vāto apām vṣṣapvān : cīcītām indraparvatā yuvāṁ nas tām no vīcve varivasyantu devāḥ.

the gods grant us free room;" i. 132. 6:¹ "As champions, O Indra and Parvata, thrust aside every one that would conquer us, thrust him aside with the thunderbolt;" iii. 53. 1:² "Indra and Parvata, bring hither in the lofty wagon the wished-for, the hero-strengthening refreshment; graciously accept at the sacrifice the proffered gifts; delight yourselves with the hymns, intoxicating yourselves with the beverage."

Indra's Cosmogonic Labors.—In the passages of the Rig-Veda which have now to engage our attention, Indra's activity reaches far beyond his original sphere in nature. He rises from a god who manifests himself in the thunderstorm to the level of a creator and preserver of the universe, to a cosmogonic power whose activity makes that of the other deities, at least in this field, seem almost superfluous. Yet the development of ideas which here presents itself is perfectly logical and intelligible. Indra's cosmogonic activity is after all nothing but an ideal generalization of his labors in his own province of nature. The intermediate steps in the development of these ideas I suppose to have been as follows:

1. Indra restores to the various regions of the universe, which have been shaken and confused by the battle of the elements, their pristine order.

2. He who does this must in the first place have arranged and fixed the spaces of the universe.

3. Their arranger must also have been their creator.

Such seem to have been the successive stages of thought. In the case of particular verses it is often difficult, if not impossible, to say upon what step of development the ideas contained in them stand; when taken in their totality, however, they indicate with tolerable certainty such a gradation.

1. After the battle of the elements, Indra restores order to the universe. Thus, i. 56. 5:³ "When thou hadst fastened the atmosphere above the unshakable earth in the frame of the sky, by thy power; when thou, O Indra, in intoxication, in impatient excitement, hadst slain the enemy, then didst thou let loose the water-floods" (cf. v. 6); x. 113. 4:⁴ "As soon as he was born, the hero crowded his enemies apart; he looked about

¹ yuvám tám indraparvatā puroyúdhā yó naḥ pṛtanyād āpa tám-tam id dhatam vājreṇa tám-tam id dhatam.

² indraparvatā bṛhatā ráthena vāmīr īṣa ā vahatam suvīraḥ: vitám havyāny adhvaréṣu devā vārdhethām gīrbhír īlayā mādantā.

³ ví yát tīró dharúṇam ácyutam rájó 'tīṣṭhipo divá ātāsu barhāpā: svārmīḥ yáu mada indra hārṣyāhan vṛtrám nīr apām aubho arṇavam.

⁴ jajñāná evā vy ābādhata spṛdhaḥ prāpaḥyad vīró abhí pāúṣyam rāṇam: ávr̥ccad ádrim áva sasyádaḥ sṛjad ástabhnān nákaḥ svapasyáyā pṛthúm.

him for heroic deeds and for battle (cf. viii. 45. 4; 66. 1); he broke open the rock, he poured out the water-floods, he fastened with skill the broad heaven." Cf. i. 62. 5; vi. 30. 3; viii. 78. 5; x. 111. 5.

2. Indra fixes the universe and maintains order in general. Thus, ii. 12. 2: "Who fastened the tottering earth, who bade the quivering mountains stand fast, who gave the air its boundaries and the heaven its supports—that, O ye nations, is Indra;" ii. 13. 10: "Thou hast fastened the six directions (i. e. the four cardinal points of the compass, and toward the zenith and nadir), five (of which) are visible (i. e. the first five: the sixth is invisible, owing to the intervention of the earth); and all this hast thou encompassed;" viii. 15. 2: "The great god whose mighty power, by reason of his strength, held fast both worlds, the mountains, the fields, the waters, the light;" x. 89. 4: "He who by his power fastened apart Heaven and Earth, as (one fastens) wheels with an axle:" cf. further v. 1 of the same hymn, and i. 62. 7; 121. 2; ii. 15. 2; 17. 5; iii. 30. 9; v. 29. 4; vi. 17. 7; viii. 14. 9. Especially important in this connection is Vāl. 3. 8: "After he, who through his power won the water-skin (i. e. the cloud) by crushing Ḡṣṇa with blows, had fastened the sky firmly, spreading it out, then first was born the earth-dweller (i. e. man)."

The step from this stage of development in the conception of Indra's cosmogonic activity to the next, i. e. to the belief that he actually created all that he afterward restored to order and preserved, was very small and easy. Just here it is often extremely hard to decide in which group particular passages belong; hence I will quote only very plain ones.

3. Indra actually created the world: x. 54. 3: "Since thou didst create out of thine own person father and mother (i. e. Heaven and Earth) at once." In viii. 36. 4, Indra is called *janitā divo janitā pṛthivyāḥ*, 'creator of Heaven, creator of earth.'

In a perfectly analogous manner was developed the conception of his relations to the sun and the other heavenly bodies. Indra frees the sun from the veil of darkness which the thunderstorm spreads around it, and makes it revolve in freedom;

¹ ṣaḥ astabhñā viṣṭīraḥ pāñca saṁdīḇaḥ pāri paró abhavaḥ sāsy ukthyāḥ.

² yāsya dvibārhaso bṛhāt sāho dādāhā ródasi: girīr ājrān apāḥ svār vṛṣatvanā.

³ yó ākṣeṇeva cakriyā cācībhīr viṣvak tastāmbha pṛthivīm utā dyām.

⁴ prā yó nanakṣe abhy ójaṁ krivīm vadhāḥ ḡṣṇam nighoṣāyan: yadéd āstambhīt prathāyann amūm divam ād īj janiṣṭa pāṛthivāḥ.

⁵ yān mātāraḥ ca pitāraḥ ca sākām ājanayathās tanvāḥ svāyāḥ.

he directs its course in general, and guides its daily journey about the earth; finally he created it to begin with.

1. Indra frees the obscured sun, and the other celestial lights as well: v. 40. 6: "When thou, O Indra, hadst brought to naught the enchantments of Svarbhānu, which were going on in the sky, then did Atri, by the fourth prayer,² again recover the sun, which was enveloped in impious darkness;" i. 51. 4: "When thou, O Indra, hadst by thy might slain the dragon Vṛtra, thou didst make the sun climb the sky, that it might become visible." Cf. iv. 30. 6; vi. 17. 5; ii. 13. 5; also several of the passages cited in the section treating of Vṛtra; and vi. 72. 1, addressed to Indra and Soma (p. 164).

2. Indra regulates in general the courses of the sun and the other celestial bodies: iv. 16. 4: "When the sun became visible, beautiful to behold with its rays, when they (the rays) streamed out a great light in the early morning;" then did the hero in his graciousness turn the dim confused gloom into sight for the heroes" (i. e. made it possible for men to see); iii. 30. 13: "At the departure of night men see with joy the great many-colored appearance of the brightening dawn; when she (the dawn) approaches in glory, all know that Indra's many works are well done." Cf. vi. 30. 2; iii. 30. 12: "The sun mistakes not the appointed courses which from day to day are marked out for him by the driver of sorrel steeds; when he has run through his journey, he halts with his horses; and that is his (i. e. Indra's) doing;" v. 31. 11: "He brought forward again the wagon of the sun, which in the darkness had run backward" (i. e. he made the sun, which during the night had returned from west to east, rise again in the east); i. 102. 2: "Sun and moon go by for us in turn, O Indra, that we may

¹ svarbhānor ādha yād indra māyā avó divó vartamānā avāhan: gū-
lham sūryam tāmāśapavratena turfyena brāhmaṇāvindad ātriḥ.

² Perhaps: not until the fourth prayer had been said; i. e. after long be-
seeching.

³ vṛtrām yād indra śavasāvadhīr āhim ād it sūryam divy ārohayo drṣṭe.

⁴ svār yād védi sudṛṣṭikam arkāir māhi jyóti rucur yād dha vāstoḥ:
andhā tāmāśai dūdhitā vicākṣe nṛbhyaḥ cakāra nṛtamo abhiṣṭāu.

⁵ I follow Grassmann's rendering; the lack of accent on *rucur* is, however,
then irregular.

⁶ didṛkṣanta uśāso yāmann aktór vivāsvatyā māhi citrām ānikam:
vīcve jānanti mahinā yād āgād indrasya kārma sūktā purāṇi.

⁷ diṣaḥ sūryo ná mināti prādiṣṭā divó-dive hāryaḥ vaprasūtāḥ: sá yād
ānā ādhvāna ād id ācāvīr vimócanam kṛṇute tát tv āsya.

⁸ sūraḥ cid rátham páritakmyāyām pūrvam karad úparam jajuvāsam.

⁹ asmé sūryācandramāsābhicākṣe ṣṛaddhé kām indra carato vitarturām.

see, and may put our trust in thee;" x. 138. 6:¹ "Thou hast determined the rules for the moons in the sky; the father (Heaven) bears a disk marked off by thee." Cf. also i. 121. 13; iv. 28. 2; vi. 72. 2; x. 171. 4.

Possibly the Pedu-myth belongs in this connection. Pedu receives from the Aṣvins a white horse, which in i. 118. 9 is called *indrajūta*, 'driven on by Indra.' If Pedu be really the sun, as Myriantheus maintains (*Aṣvins*, p. 102 ff.), this is then a further indication of Indra's labors as a director of the sun's course.

3. Indra actually created the sun and the heavenly lights: viii. 12. 30:² "When thou didst place in the sky the sun, a great light, then," etc.; 87. 2:³ "Thou, O Indra, art almighty, thou madest the sun to shine; thou art all-active, all-divine, thou art great;" ii. 12. 7: "Who created the sun and the dawn." Cf. iii. 31. 15; 32. 8; vi. 17. 5; 30. 5; 39. 3, 4.

The process by which Indra is made the creator of plants, trees, etc., is much shorter; for vegetable growths of all sorts depend for their sustenance upon the bestower of water and light. Thus, ii. 13. 6:⁴ "Thou, who givest nourishment and riches, who didst milk from the moist (rain and dew) the dry and sweet" (i. e. plants, particularly the Soma): v. 7:⁵ "Thou who didst scatter over the fields the blossoms and fruits according to the law (of nature?), who didst also distribute the brooks;" iii. 34. 10:⁶ "Indra bestowed plants and days, bestowed trees and the air." Cf. x. 138. 2.

In correspondence with all these various ideas, we find in the Veda many passages which actually call Indra creator and director of the entire universe. Some of these I quote here, while others I reserve for the section treating of Indra's greatness, in Part IV. In ii. 30. 1⁷ we find Indra called "The divine ruler who established order." Further, x. 54. 5:⁸ "Thou art, O Indra, the arranger and the giver;" iv. 30. 22: "Thou who didst fatally wound Vṛtra, thou who directest the

¹ *māsān vidhānam adadhā ādhi dyāvi tvāyā vibhinnaṃ bharati pradhīm pitā.*

² *yadā sūryam amūṃ divi cakraṃ jyōtir ādhārayaḥ: ād it etc.*

³ *tvām indrabhībhūr asi tvām sūryam arocayaḥ: viśvākarmā viśvā-devo mahān asi.*

⁴ *yó bhōjanam ca dāyase ca vārdhanam ādrād ā cūṣkam mādhumad dudōhitha.*

⁵ *yāḥ puṣpīṇi ca pravāc ca dhārmanādhi dāne vy āvānti ādhārayaḥ.*

⁶ *indra ōsadhīr asanod āhāni vānaspatīr asanod antārikṣam.*

⁷ *ṛtām devāḥ kṛtvānt savitā.*

⁸ *tvām ājñātā tvām indrāsi datā.*

whole world, thou art the shepherd of all ;" i. 52. 14 :¹ "Thou whose greatness not Heaven and Earth, whose ends not the streams of the atmosphere reached, when thou in thy intoxication didst battle with the rain-hinderer—thou alone didst create all other things in turn ;" viii. 85. 6 :² "Let us praise (Indra), who created all these creatures, which are under him."

Conceptions of a deity could hardly be more exalted. Such hyperbolical thoughts as these led earlier scholars to consider Indra as originally the supreme god of the Vedic pantheon. I trust the foregoing may have shown the erroneousness of this view.

Indra's Benevolence, and his relations with his Worshipers.—The consideration of the different fields in which Indra displays his potent energy will have made unnecessary a detailed explanation of the prayers addressed to him. It is evident that the god of the thunderstorm, who conquers the stealers of rain and light, the mightiest of all warriors, is invoked that he may grant water and light, may banish all demons, and extend protection in the struggle with aliens and opponents of Aryan blood. But from the conception of the heroic deeds which he performs, of his bounteousness in bestowing rain, light, and active assistance upon his devotees, arose the idea that he granted wealth and prosperity in all their varieties ; and in this sense many prayers are directed to him.

By "wealth" the Indian of Vedic times understood before all else abundance of cattle for his bodily sustenance, and of children—i. e. a large family which should be able to defend itself against hostile aggression—and a safe estate which would easily support its owners. It is but a very natural consequence of the desire for children which prompts the poet in his naïveté to ask for women. A few verses will suffice for illustration of these points. Thus, iv. 32. 17: "We beseech Indra for a thousand yoke of horses, for a thousand measures of Soma." 18. "We shake down from thee a hundred thousand cows ; may thy gifts come unto us." 19. "Ten jars of gold have we received from thee ; thou art a rich giver, O slayer of Vrtra." 20. "Thou abundant giver, give an abundance ; bring hither for us not a little, but much ; certainly thou wilt give abundance, O Indra." 21. "For thou art everywhere known as an abundant giver, O hero, Vrtra-slayer ; let us share in thy gifts."

Malthusian doctrines had not begun to be promulgated in Vedic times : vi. 18. 6 : "In the acquisition of children and

¹ ná yásya dyāvāpṛthivī ānu vyāco ná sīndhavo rājaso āntam ānaçūḥ :
nótā svāvṛṣṭīm mādē asya yúdyata éko anyác cakṛṣe víçvam ānuśák.

² tám u ştavāma yá imā jajāna víçvā jatāny ávarāpy asmāt.

grand-children one must invoke the thunderer;" 19. 7: "When thou, O Indra, hast a right vigorous drunkenness, that gives victory in battle, bring it hither, that we may by its means consider ourselves victorious in our struggles for children and grand-children;" iv. 17. 6: "When wishing women, we draw from the woman-giver, as from a well with a pitcher."

Verse 13 of the same hymn exhibits Indra as the deity who renders assistance to men in the search for dwelling-places and in their settlements.

The value of cattle for an Indian family in Vedic times can hardly be overestimated. Cows furnished the milk upon which the family mainly subsisted, and which was indispensable in the preparation of butter and suet, both of which played an important part in the sacrifice. Cattle, moreover, served as a medium of exchange, for which reason we find such frequent mention of the price of "a hundred" or "a thousand cows" (in iv. 24. 10 a priest offers to lend his image of Indra for ten cows). For instance, i. 33. 1: "Will not the invulnerable one grant us riches and cattle, our highest desire?" (*rāyo* and *gāvam* are properly objective genitives after *ketam*). Hence it was a particularly great and noble deed when Indra put into the cows, which the poet thought of as "raw," the nourishing milk, which the poet in his childish simplicity imagined already "cooked," since it was fit to be used as food without previous preparation. So, e. g. i. 62. 9: "Thou didst place in the raw cows, the black and the red ones, the white cooked milk;" iii. 30. 14; 39. 6; viii. 78. 7; *et saepp.* (Cf. Aufrecht, Introd. to Rig-Veda, 2nd ed., p. xvii.) How much this redounded to Indra's credit may be seen from the fact that even Tvāṣṭar, the skilled artificer of the gods, could not perform this feat, as Indra says in his own praise, x. 49. 10. Likewise only Indra is able to coax milk from the bewitched barren cattle (iv. 19. 7).

The manner in which the requests are preferred is of quite as much interest as the requests themselves. In the following chapter, where we shall have to notice the Vedic descriptions of Indra's personal character, we shall find the humanizing of his nature, and so to speak the popularization of his person, carried to an extent unparalleled in the accounts of any other Vedic deity whatever. The poet talks with Indra as a man with a man; often too as a poor wretch with a rich and powerful lord; and from such hymns speaks forth often a crouching pusillanimous spirit, and the fear of his violence, rather than

¹ *yás te mādah pṛtanāṣāḥ āmṛdhra indra tām na ā bhara gūṇavāṁsam: yéna tokāśya tánayasya sātāu mahālmāhi jigivāṁsas tvótāh.*

² *anāmṛpāḥ kuvīd ād asya rāyó gāvāḥ kētam páram āvārjate nah.*

³ *amāsu cid dadhiṣe pakvām antāḥ páyah kṛṇāsu rūṇad róhiṇiṣu.*

reverential awe for his magnificent and sublime nature. Often such prayers degenerate into whining entreaties. Yet other poets greet the god with a hail-fellow-well-met! and in such cases no too great respect is paid to Indra's divinity; while often, again, the coarsest, broadest popular humor breaks through. Compare, for example, the already quoted verse x. 38. 5, on p. 181. Especially when the subject is a Soma-drinking-bout do we find Indra described as a very human character. But through all the hymns runs an unswerving devotion and fidelity toward the national deity, a firm belief in his existence, in spite of all godless blasphemers, and a touching reliance upon his goodness. Muir, S. T., v. 103 ff., has collected a large number of passages which throw abundant light upon these points. I follow his arrangement.

Men must not doubt Indra's existence (ii. 12. 5; vi. 18. 3; viii. 89. 3, 4), but cherish a firm belief in him (i. 102. 2; 108. 6; vi. 28. 5; ix. 113. 2); for he alone is an everpresent helper (i. 84. 19; vii. 23. 5), a liberator and an advocate (viii. 85. 20), a wall of defense, a castle (viii. 69. 7). His friend never meets with disaster (x. 152. 1), for he is helper of the upright (viii. 69. 3). He is an old friend of the poets (vi. 18. 5; 21. 5, 8), even a brother (iii. 53. 5), or a father, and that too the best of all fathers (iv. 17. 17); the bard clasps him as a son clasps his father (iii. 53. 2), or as women embrace their husbands (i. 62. 11; 186. 7; x. 43. 1). But often the poet becomes impatient, and then he addresses the god with words which are none too respectful, as for example in iv. 32, and iv. 21. 9: "I would do better than thou, were I only Indra," says the author of vii. 32; "I would bestow upon my worshippers cows and other property every day." "Be not like a lazy priest, thou lord of possessions"—thus in viii. 81. 30. Indra must not waste any time in the dwellings of other worshippers (ii. 18. 3; iii. 25. 5; x. 38. 5), but spring over the barriers with which they attempt to hold him in captivity (iii. 45. 1).

The description of these intimate relations between the mighty and generous deity and his worshippers in general will receive greater completeness from a few examples, celebrated particularly often in the Veda, of his care for certain eminent chiefs among his devotees.

Kutsa, of whom mention has already been made, seems to have held the highest place among Indra's favorites. The god condescends to take him upon his own chariot, and kills for him the demon *Çuṣṇa*. He even arrests the progress of the sun through the sky, that the night may not interrupt the battle in which Kutsa is engaged before he shall prove victorious. Thus namely is to be explained the fact that Indra takes away a wheel from the sun's chariot for Kutsa's benefit:

v. 29. 10 :¹ "One wheel of the sun didst thou pull off for Kutsa; the other thou didst leave in place, that it (the sun) might yet advance." Compare iv. 30. 4 in Geldner and Kaegi's translation, and their comments.

Turvaça and Yadu were two non-Aryans (viii. 10. 5), who could not swim (*asnātr*, ii. 15. 5; iv. 30. 17), and who received assistance from Indra while crossing a river on an expedition into a strange country: vi. 45. 1 :² "The young Indra who with faithful guidance brought hither Turvaça and Yadu out of the distant land, is our friend;" v. 31. 8 :³ "Thou didst stay the deep-flowing waters near the shore for Turvaça and Yadu."

It was perhaps on the same occasion that Indra showed a similar favor to Turvīti and Vayya, for they are named with Turvaça and Yadu in i. 54. 6, as recipients of his kindness; and we read in ii. 13. 12 :⁴ "For Turvīti and Vayya didst thou stay the current of the flowing waters, that they might cross."

Sudās, the oft-mentioned king of the Trtsus, was a devoted worshipper of Indra, who manifested his graciousness in the assistance and preservation of Sudās in the latter's struggle against the allied power of ten hostile princes. Cf. vii. 19. 3; 20. 2; 32. 10, 11; and the entire hymn vii. 83, which makes Indra and Varuṇa to have been Sudās's helpers. The sacerdotal family of the Vasiṣṭhas stood in high favor at Sudās's court, and not the least part of the credit for his victory is said to have been due to their prayers (cf. vii. 33. 1 ff.). The details are described with an elaboration unusual in the Veda, yet they are sometimes far from clear (vii. 18). But this much is certain, that the whole episode of Sudās rests upon a historical basis, and points to the struggles of an ambitious and war-like dynasty.

Mudgala and his spouse Mudgalānī, who stood under Indra's protection, entered into battle riding upon a chariot drawn by a bull and a stallion. Indra imparted strength to the bull, who proceeded with all deliberation *in medias res*; and Mudgala won the fight (x. 102).

Not only in war, but in peace as well, do we find Indra playing an active and helping part in the affairs of mankind. He provided a young wife for the aged Kaksīvant: i. 51. 13 : "Upon the tottering old man Kaksīvant, because he pressed Soma, thou didst bestow the young Vṛcayā." He rejuvenates

¹ prānyāc cakrām avṛhaḥ sūryasya kṛtsāyānyād vārivo yātave 'kaḥ.

² yā ānayat parāvātāḥ sūnīti turvācaḥ yādum: indraḥ sā no yūvā sākha.

³ tvām apō yādave turvācāyāramayaḥ sudūghāḥ parā indra.

⁴ āramayaḥ sārāpasas tārāya kām turvītaye ca vayyāya ca srutīm.

old maids : iv. 19. 7 :¹ "He made the unwedded maidens, who observed the rites, to be juicy like spouting flowing springs." His arm helped the blind and the lame (iv. 30. 19 ; ii. 13. 12 ; 15. 7 ; iv. 19. 9). He rescues from certain death the child of the maiden, which its mother in shame had made away with—or, according to one version, had thrown upon an ant-hill : ii. 15. 7 :² "He knows the girls' hiding-place (i. e. where they secrete their illegitimate children) ; coming to light, the child that was exposed came forth :"³ cf. 13. 12 : iv. 30. 16 ; and 19. 9 : "Thou master of sorrel steeds didst draw forth from the place of concealment the maiden's child, which the ants were gnawing." This anecdote reminds one of the stories told of Indra's own childhood, as in iv. 18. Whether or no such current fables concerning Indra gave rise to the view that he was an especial protector of exposed children is not likely to be proved.

Indra and Pūṣan.—It seems strange at first sight to discover by the side of the mighty war-god, whose whole energy is so often devoted to the annihilation of his enemies and of the Soma-offerings, a deity of so contrasted a nature as Pūṣan. That the Vedic poets fully realized the strangeness of the combination is plainly apparent from their humorous descriptions of Pūṣan. We read e. g. in vi. 57. 2 :⁴ "The one seats himself in order to drink the pressed juice from the goblet ; the other demands porridge ;"⁵ 3 :⁶ "Two goats draw the one, two compact (strong) sorrel steeds the other ; with these two (gods) together one defeats his enemies."

Yet there must have been points of agreement between the natures of both gods, since the unions of deities which we find in the Veda are not, except in general invocations, by any means arbitrary. Pūṣan, as is evident from the hymns referring to him, was a personification of the fructifying sun and its beneficent influence, indicated also by the epithet *āghrñi*, 'glowing,' applied to him iii. 62. 7 *et saepp.*, and the allusions to his sister Sūryā vi. 55. 4, 5 ; 58. 4 ; and from the stories of his eating porridge (which started the fable of his "rotten teeth," *karudatin*, iv. 30. 4), and of his driving behind goats and carrying a goad (*aṣṭrā*, vi. 58. 2), we may reasonably conclude that he was originally a deity of the shepherds. Above all, however, he provides for fruitfulness of flocks and herds,

¹ *prāgrūvo nabhanvò ná vákvā dhvasrā apinvad yuvatir ṛtajñāh.*

² *sá vidvān apagohām kanfnām āvir bhāvann úd atiṣṭhat parāvṛk.*

³ *sómam anyá úpāsadat pátave camvòḥ sutám : karambhām anyá ichati.*

⁴ If *camā* signifies a drinking-vessel : see Haug, Gött. Gel. Anz., 1875, p. 592.

⁵ *ajā anyāsya váhnyo hári anyāsya sámbrhṭā : tābhyām vṛtrāni jighnate.*

upon which Grassmann (*Wtbch.*, s. v. *Pūṣan*) well remarks : "The prosperity which he bestows is not (as in the case of Indra, Parjanya, the Maruts, etc.) dependent upon the rain, but upon the light, particularly the sunlight." He is protector of cattle, of mankind, and of all beings. In x. 17. 3 he is called *anaṣṭapaçur bhuvanasya gopāh*, 'The shepherd of the world, whose flock receives no hurt.'

Pūṣan's junction with Indra, then, rests upon a double basis. As givers of prosperity in general they are praised in the following verses: ii. 40. 2: 'Indra, together with Soma and Pūṣan, these two, created in the raw cows the cooked milk" (see above, p. 187); iii. 57. 2: "Skilful are the heroes, Indra and Pūṣan; the dearly-loved (waters) stream almost without ceasing from the sky; may I, O ye good ones (plur.), receive this favor, that all gods may delight themselves on earth" (*bhūmyām* to be supplied for *asyām*?). The following passage from a hymn addressed to various rural deities exhibits plainly their activity in sending prosperity to their worshippers: iv. 57. 7: "May Indra sink the furrow, Pūṣan give it its direction; may it produce bounteously for us throughout each future year."

Upon the other of the two principal sides of Pūṣan's nature, which shows him as a protector in all needs (i. 42; vi. 53, 54), seems to rest his union with Indra in the following passages: vi. 56. 2: "Indra, the captain of the army, the best chariot-guider, defeats the enemies, in the company of his ally (Pūṣan)" (cf. pāda c of vi. 57. 3, quoted above). And similarly, Pūṣan's character as a protector brought him into Indra's company in the fight with the demons: vi. 57. 4: "When Indra, best of heroes, took away with him the great dispersing waters, there was Pūṣan in his company." Geldner conjectures *vṛtaḥ*, 'imprisoned,' for *ritaḥ*.

Pūṣan and Viṣṇu act as encouragers of Indra during the Vṛtra-battle. Thus, vi. 17. 11: "For thee, whom all the Maruts with one accord cheered on, (Agni) roasted a hundred

¹ *abhyām indraḥ pakvām āmāsv antāḥ somāpūṣābhyām janad usriyāsu.*

² *indraḥ sū pūṣā vṛṣaṇā suhāstā divó ná prītāḥ ṇaṇāyām duduhre: víçve yád asyām raṇāyanta devāḥ prá vó 'tra vasavaḥ sumnām aṇyām.*

³ *indraḥ sītām ní gṛhṇātu tām pūṣānu yachatu: sá naḥ páyasvati duhām úttarām-uttarām sāmām.*

⁴ *utá ghā sá rathitamāḥ sákhyā sátpatir yujā: indro vṛtrāṇi jighnate.*

⁵ *yád indro ánayad ríto mahír apó vṛṣantamaḥ: táttra pūṣābhavat sácā.*

⁶ *várdhān yām víçve marútaḥ sajósāḥ pácac chatām mahisāḥ indra túbhyam: pūṣā viṣṇus trīṇi sárāṇsi dhāvan vṛtrahāṇam madirām aṇḡgām asmāi.*

bulls, O Indra; Pūṣan and Viṣṇu caused to flow for thee three ponds full of enemy-slaying, intoxicating Soma" (†).

Indra and the Aṣvins.—The number of passages in the Rig-Veda which bring the Aṣvins into direct connection with Indra is very small. I append all such that I have found.

i. 116. 21: "On one and the same morning, O Aṣvins, ye did help Vācā, to his great joy, so that he won thousand-fold booty; united with Indra, O ye heroes, ye did both drive off the hostile spectre from Pṛthuṣravas." In i. 182. 2 the Aṣvins are called *indrataṃā*. See above, p. 124. In viii. 9. 12 and 35. 1, they are invited along with Indra and the other gods to the sacrifice; and the compound *indrānāsatyā* (voc.) occurs in 26. 8. Thus, x. 73. 4: "Together with these come in haste to the sacrifice, bring the Nāsatyā (Aṣvins) hither to an alliance; in thy treasure-house, O Indra, thou keepest many (treasures); the Aṣvins brought gifts unto thee, O hero;" 131. 4: "Ye Aṣvins, lords of the rapid flight, after ye had drunk the well-intoxicating Soma, did help Indra in his deeds (i. e. the battle) against the demon Namuci;" 5: "As parents help a son, so did both Aṣvins with prudence and skill help thee, O Indra."

The Aṣvins are also found in Indra's company at the creation of Pedu's horse. See above, p. 185.

We see from these verses that the union between Indra and the Aṣvins is a very loose one. I am therefore inclined to seek the origin of their association in a mere coincidence of certain later developed phases of their character. Starting from different observations of natural phenomena, the conceptions of their natures run parallel for a time in the course of their development. We have learned that Indra was originally a god of the thunderstorm, who overcame the rain-stealing demons; and Myriantheus has proved conclusively that the Aṣvins were above all else gods who recovered and bestowed light. And whereas the similarity of these conceptions in their primitive form is complete, so we find it undiminished in the course of their development from their original nuclei.

¹ *ékasyā vāstor āvataṃ rāpāya vācam aṣvinā sanāye sahasrā: nīr aha-
taṃ duchūnā indravantā pṛthuṣravaso vṛṣaṇāv ārātīḥ.*

² *samanā tūrṇīr ūpa yāsi yajñām ā nāsatyā sakhyāya vakṣi: vasāvyām
indra dhārayaḥ sahasrāṣvinaḥ cūra dadatur maghāni.*

³ *yuvāṃ surāmaṃ aṣvinā nāmucāv āsuré sácā: vipipānā cūbhas pati
indram kārmasv āvataṃ.*

⁴ Myriantheus: "In the sacrificial ceremonies against the evil spirit Namuci" (†). The translation given here is but an attempt. Grassmann conjectures *vīpāpānā*. See in Appendix, s. v. *Namuci*.

⁵ *putrām iva pitārāv aṣvinobhēndrāvāthuh kāvyāir dāśanābhiḥ.*

Like Indra, the Aṣvins are besought to destroy all demons; as Indra's help is then implored against non-Aryan enemies, so we find the Aṣvins entreated for the same favor; Indra's efforts, like those of the Aṣvins, are directed toward the restoration of the natural order of things, which suffers daily interruption. And just at this point the conceptions of the two war-gods on the one hand, and of the one war-god on the other, overlap each other, so that we find the Aṣvins praised as recoverers of rain, and Indra celebrated as restorer of light—a complete exchange of their original functions. A step further, and we discover the Aṣvins and Indra alike as gods of prosperity and fruitfulness in general; hence, as also from the intimate relations between them and their worshippers, they become benevolent and healing deities—a trait of character much more elaborately amplified in the case of the Aṣvins than in that of Indra.

It is somewhat curious that, in spite of these many points of contact between Aṣvin-myths and Indra-myths, so few passages occur in which they are mentioned together; and it is also remarkable that of any rivalry between the Thunderer and the Horsemen there are discoverable no indications whatever.

IV. Descriptions of Indra's Person.

In the three previous Parts I have endeavored to determine Indra's original position in the Vedic pantheon, to illustrate, and, where possible, to harmonize the fables of his origin, and to define and describe not only his activity in the field of natural phenomena, but also his concern with the most various circumstances of human life. In the fourth and last Part I shall attempt to reproduce that picture of Indra's person which Indian fancy painted for itself.

In the case of no other Vedic divinity do we find so pronounced an anthropomorphism, so plastic a figure, as in that of Indra—a circumstance readily explainable from his position as war-god and national favorite of the Indian people. The poets never weary of describing his greatness, his huge size, his impetuous vigor, his craftiness and shrewdness, the riches at his disposal and his generosity in distributing them, the mighty horses and the strong chariot with which he travels, the fearful unerring weapons which he carries. And so it happens that the Indra-hymns afford us not only a remarkably detailed portraiture of this divinity, as it was developed in the Indian mind, but also not less faithful indications of Indian character and life, from which many particulars were unconsciously transferred to the likeness of Indra.

Indra is lord of might (i. 11. 2), the first among highest ones

(viii. 50. 2), the mightiest of the gods, who concentrated in him all their manly vigor, power, and wisdom (i. 80. 15), and are far from being his equals (vi. 21. 10; vii. 21. 7). Neither youth nor grown man attains an equal greatness with him, for he filled the universe with his person, and crowded out the lights of heaven (i. 81. 5); neither men nor gods, nor the heavenly waters, ever reached the limit of his might (i. 100. 15; 54. 1; ii. 16. 3; vi. 29. 5), for he is immeasurable (i. 102. 7; iv. 16. 5). He takes the great heavens upon his head (ii. 17. 2), even the remotest regions of ether are for him not distant (iii. 30. 2). Earth cannot confine him (i. 55. 1; iii. 36. 4); Heaven and Earth together do not suffice for his girdle (i. 73. 6); he grows beyond them when intoxicated with Soma (i. 100. 14; iii. 36. 6; vi. 21. 2; viii. 6. 15; 12. 24; 77. 5; 87. 5; 89. 4); nay, he is even greater than Heaven, Earth, and Atmosphere combined (i. 10. 8; iii. 46. 3). The half of him alone is more than both worlds together (vi. 30. 1); he covers the earth with one thigh (iii. 32. 11). Of his might one part is on earth, the other in the sky; it is concentrated in the midst, like the light (? i. 103. 1). "Were the earth ten times as great, and though men live for ever, yet thy greatness would still be celebrated day after day" (i. 52. 11). Both worlds and the mountains tremble at his breath (ii. 12. 1—he is the thunderstorm!), even the god-like tree bends before him; everything upon earth is shaken, both worlds bow before him like an obedient woman. He is king of the heavenly race and of all nations upon earth (i. 100. 1; iii. 31. 8; 46. 2; vi. 22. 9; 36. 4; vii. 27. 3; viii. 37. 3; 84. 3), the lord of flowing and of standing water, and of Soma (vi. 44. 21; viii. 53. 3), and he knows them all thoroughly (viii. 46. 12). Even the savage wolf abides by his decrees (viii. 55. 8), for his will determines all things (50. 4). He holds the tribes of men in his hand (vi. 31. 1); both boundless worlds are to him but a handful when he grasps them (iii. 30. 5). The smallest deed of such a divinity is at once bruited abroad throughout the whole world (viii. 45. 32). Unto him the high mountains are plains, he finds a ford in the deepest water (vi. 24. 8). He rages and roars when going on his expeditions, loudly shouting (ii. 20. 3: cf. the epithet *purūravas* in x. 95. 7, which, as already remarked above, p. 129, is doubtless to be applied to Indra); snorting and fuming, raising the dust to the sky, he hurries through the air (iii. 51. 2; iv. 16. 5; v. 34. 5; vi. 18. 2), and dashes everything in pieces (ii. 21. 2); he is unrestrainable, irresistible (i. 84. 2, 7). After the feast he turns his course hither and thither, like a beast of prey, dreadful as a horned bull, like a raging whirlwind (iv. 32. 2; vii. 19. 1; viii. 33. 8). His path is inaccessible as the sun's (i. 100. 2), and both worlds

cannot then hold him fast (i. 10. 8). He finds no evenly-matched opponent; none cast him to earth, all are cast to earth by him (i. 33. 2; 129. 4); for he coerces all (v. 34. 6; 35. 4; vi. 17. 4; 18. 1, 2; 20. 3; 25. 5; 44. 4; vii. 20. 3), and no one who has provoked him can long endure his wrath (v. 34. 7; vii. 31. 12); he cannot be humbled. He sees and hears all things (viii. 67. 5), and when he roars even the deaf may hear and tremble (x. 27. 5). Not even the gods can arrest Indra (iv. 17. 19; 30. 3, 5); and whenever he slays a man, he fears not the vengeance of relatives (v. 34. 4). Thus invincible was he ever, thus will he ever be; no one will ever stand in his way, it matters not what he may undertake (iv. 30. 23).

Indra possesses all the treasures of the world (i. 30. 10; 174. 1; vi. 45. 8) in his treasure-house (viii. 1. 22); he rules over the abodes of men and the stalls of cattle (iv. 20. 8); all paths to riches unite in him, as streams in the ocean (vi. 19. 5). All herds round about are his, and he watches them with the eye of the sun (vii. 98. 6). He is a flowing stream of possessions (viii. 32. 13), a spring of gold (50. 6), a depository of riches, as vast as four oceans (x. 47. 2). From this he makes generous presents to men; neither god nor man, nor rocks nor fortresses, can restrain his generosity (viii. 14. 4; 70. 3; 77. 3). He is the most generous of all givers, he gives without hesitation from full hands (i. 30. 1; iv. 31. 7). His assistance is everlasting. He keeps not back the flocks, when he has heard the song of praise; he is a bull for him that wishes bulls, a horse for the seeker after horses (vi. 24. 1; 45. 23, 26); he never refuses (vii. 27. 4), but assists in obtaining still greater riches (viii. 16. 10). Even a hundred envious meddlers can restrain his gifts as little as they can frustrate his plans (iv. 31. 9). "We cannot grasp thy whole greatness, O Indra," says the author of vi. 27, "nor thy generosity, O generous one, nor all thy ever new gifts; no one has fathomed thy power." The magnitude of his bounty is not to be comprehended; for his gifts, like the light, spread abroad over the whole earth (viii. 24. 21); there exists no one who can say: "He has not given;" but it is said: "Indra alone is the active dispenser of gifts, his many acts of mercy follow one another swiftly" (vii. 26. 4), they spring up side by side like shoots of trees (vi. 24. 3).

The god's youth and vigor are as unfailing as his gifts to mortals. He grows not old, nor is he subject to death (iii. 32. 7; vi. 19. 2); he makes others grow old, while he himself remains eternally young (ii. 16. 1); neither months nor years consume him, days do not waste him away (iii. 46. 1; vi. 24. 7; x. 48. 5). When the mighty prince says to himself: "I shall not die," then even this thought is realized (viii. 82. 5). In x.

86. 11 we read: "Among all women, Indrāṇī (Indra's wife) is most happy, for her husband shall never die of old age."

And Indra is also wise and prudent (i. 61. 14; 62. 12). In his belly he carries Soma, in his limbs wondrous power, in his hand the thunderbolt, and in his head wisdom (ii. 16. 2; viii. 85. 3). He is called most sagacious of the wise (x. 112. 9), and his wisdom is unapproachable (ii. 21. 4). He is an enchanter, understands all stratagems (vi. 22. 1; 44. 14), yet he is faithful and not treacherous (viii. 51. 12); he is considered sinless (i. 129. 5). Among the Angirases he is the best Angiras, among heroes a hero, among friends a friend; he rejoices with them that rejoice, the most skilled of them all in song (i. 100. 4). He has assumed the inspiration of prophets (iii. 36. 5), he is Brahman and Ṛṣi in one. He is proud (i. 62. 10), and his mind firmly bent upon its objects (i. 102. 5).

Corresponding to his bold and warlike character, Indra appears to the eye of his worshipper's imagination with gigantic body. His frame is full of vigor, mighty his neck, brawny his back; he possesses irresistible strength in his body, it rests in his limbs as water rests in hidden springs (i. 55. 8; iv. 17. 8; v. 37. 1; viii. 1. 23; 17. 8; 67. 7). His figure is well calculated for drinking-bouts. His belly holds whole lakes of Soma, it swells like a sea (i. 8. 7; 11. 1; 30. 3; 104. 9; iii. 36. 8); his mouth is huge, like a great body of water (vi. 41. 2). His arms are sleek, his hands thick and firm, both right and left well formed; his strength lies in them, they accomplish noble works, they win the flocks and herds (i. 80. 8; 102. 6; iv. 21. 9; vi. 19. 3; viii. 32. 10; 33. 5; 50. 18; 70. 1). He has a golden beard, which he shakes with satisfaction at his approach and after the draughts of Soma (ii. 11. 17; viii. 33. 6; x. 23. 1, 4), and handsome cheeks or lips, which he puffs out on such occasions (iii. 32. 1). In several hymns the word *hari*, 'golden, sorrel,' is made the subject of endless punning, so that Indra is called "gold-cheeked" (*hariṣipra*), "golden-haired" (*harikeṣa*), "golden-bearded" (*hariṣmaçāru*), "golden-formed" (*harivarpas*); similarly *hiranyaya*, 'golden,' and *hiranyabāhu*, 'golden-armed.' From his firmness and strength he is called *āyasa*, 'of metal, brazen' (i. 7. 2; vii. 34. 4; viii. 55. 3; x. 96. 4, 5, 8, 9, 12). His whole appearance is brilliant, wonderful, splendid, like the sun in glory (i. 53. 3; 173. 4; iii. 45. 5; iv. 16. 14; 21. 2; v. 37. 1). He is adorned like the dawn (i. 57. 3), he hangs the fleecy cloud about him for an ornament (iv. 22. 2). But he can also assume any form whatever at will, through his magic powers (iii. 53. 8; vi. 47. 18).

Two passages of the Rik seem to refer to images of Indra, of some sort or other: iv. 24. 10: "Who will offer me ten cows for this my Indra here? When he has killed his enemies,

he must bring him back to me;" viii. 1. 5: "Not even for a great price would I sell thee, O slinger, not for a hundred nor a thousand nor ten thousand (cattle), O thou thunderbolt-bearer who receivest hundreds of libations." One may well imagine what hideous objects such images must have been in Vedic times; and that the *bahulā gabhastī* and the *urvīr āpo na kākud* were most successfully portrayed.

Indra rides to battle or to the sacrifice on a golden wagon or chariot, which the Rbhus built for him. It runs easily, has a good frame and good hubs, and speeds through the air swifter than thought (i. 16. 2; 102. 3; vi. 29. 2; 37. 3; x. 44. 2). Indra urges on his steeds with a golden whip (viii. 33. 11). As a rule he drives two sorrels (ii. 15. 6 calls them mares: cf. iii. 44. 3); but often this number is too small for the enthusiastic poet, who with the well-known Indian fondness for playing with numbers multiplies them without stint (ii. 18. 4, 7; iv. 46. 3; vii. 47. 18). They snort and neigh, they prance and rear during the journey, as though they were drunk like their driver (i. 81. 3; iii. 43. 6; i. 30. 16). Even Indra shrinks, tired and anxious, when after many vain efforts he has finally yoked them for his drive (x. 105. 3). They have golden manes (viii. 32. 29), straight backs (viii. 1. 25; 6. 42; iii. 35. 4), tails like peacocks (iii. 45. 1; viii. 1. 25), noble limbs (iii. 43. 4), are well groomed (v. 6); their eyes are bright as the sun, they themselves are like sunbeams (i. 16. 1; ii. 11. 16). They receive warm fodder (iii. 53. 3); well-fed, they fill out their girths (i. 10. 3). The god is carried by them as an eagle by his wings (viii. 34. 9); they are always ready for a journey, be it morning or evening when Indra would start on his rounds (i. 104. 1), they convey him to the sacrifice in a trice (x. 32. 2). They are yoked through the power of prayer, that the god may appear among his worshippers (ii. 18. 3; iii. 35. 4; viii. 1. 24; 45. 39; 87. 9). Indra received them from Heaven (i. 121. 8), or from the Rbhus (i. 111. 1). But he also travels with the horses of the wind (Vāyu?) or of the sun (Agni?) (i. 51. 10; 121. 12; x. 22. 5; Vāl. 2. 8; x. 49. 7).

Indra's usual weapon is the thunderbolt, which Tvastar made for him. This is described as golden (i. 57. 2; 85. 9; viii. 57. 3), or brazen (i. 81. 4; viii. 85. 3; x. 48. 3); easily victorious (i. 100. 13), intended to be hurled (i. 84. 11); and is called Indra's companion (*sacābhū*, i. 131. 3). It is three or four-edged (i. 121. 4; iv. 22. 2), hundred-edged (vi. 17. 10), with a hundred knots or joints (i. 80. 6), or a thousand points (v. 34. 2). Indra whets it as a bull his horns (i. 55. 1). An-

¹ mahé caná tvām adriṣaḥ párá ṣulkāya deṃyām: ná sahasráya nāyú-
tāya vajrivo ná ṣatāya ṣatāmagha.

other weapon, *çamba*, perhaps a staff or club, is mentioned in x. 42. 7. According to x. 60. 3, he carries a goad (*paviravat*); in i. 32. 12, and x. 180. 2, a lance; and in several passages bow and arrows (viii. 45. 4; 66. 7, 11; x. 103. 2, 3). He is often called *adrivat*, 'armed with stones'—referring doubtless to rough pieces of loose rock suitable for throwing. He also has a hook, with which he secures riches for the Soma-presser (viii. 17. 10; x. 44. 9). In some passages the word *çiprā*, generally rendered 'cheek' or 'chin,' seems to mean 'helmet;' so perhaps in *hriçipra*, vi. 29. 6. Cf. the remarks on the word in Muir's *Skt. Texts*, v. 149. According to ix. 83. 4 (see above, p. 168), Indra was armed with a net, doubtless for the purpose of entangling his opponents, as was done by the Roman *retiarii*.

Finally, the poets ascribed to Indra a household, in which he took his ease in the society of his wife *Indrāṇī*:¹ cf. iii. 53, 4-6; vii. 18. 2; x. 99. 5. As he is about to take the field against his enemies, *Indrāṇī* calls him back to get his accustomed draught of Soma. A satirical description of his domestic life is contained in the curious and very corrupt hymn x. 86, which is instructive as a possibly not unfaithful picture of the *mores* of those times. A conjugal quarrel has broken out between Indra and his spouse, the cause of which was Indra's pet monkey *Vrṣākapi*, who, besides making a nuisance of himself in many other ways, disturbed the people's sleep (? v. 22), and meddled with the secrets of his mistress's toilet (v. 5). *Indrāṇī* complains of Indra's lack of consideration for her, and declares her intention of killing the monkey—she who could boast of the greatest female charms (v. 6). Indra will not abandon his pet, which has shown itself useful on other occasions (vv. 12. 18). The quarrel ends with the reconciliation of the pair, and the monkey is reduced to order.

¹ *Indrāṇī*, a fem. formed from the masc. *indra*, is in the *Rig-Veda* hardly more than a name, without any personal characteristics; she is mentioned but five or six times. *Varuṇāṇī* is an equally rudimentary personage.

² Hardly, as Grassmann supposed, son of Indra and *Indrāṇī*.

APPENDIX.

DEMONS MENTIONED BY NAME, WITH WHOM INDRA FIGHTS.

The allusions to many of these demoniac beings are so vague that one is often in doubt to what class they belong—whether they be rain-stealers or personifications of other influences destructive to mankind.

Anarçani: mentioned only in viii. 32. 2, without nearer description. Its etymology is obscure. If from a priv. and $\sqrt{\text{arç}}$ (= *riç*), it would signify 'not-harmful.'

Arṇava is not necessarily the name of a demon, as the Pet. Dict. and Grassmann assume for the three passages x. 66. 11; 67. 12; 111. 14. In the first passage the context is best suited by rendering the word 'Air-' or 'Cloud-sea;' in 67. 12, *arṇavasya* seems to belong as adjective to *arbudasya*; and 111. 4 is probably best translated thus: "Indra, praised by the Angirases, broke the dominion (of the demons) over the mighty waves" (objective genitive).

Arbudā: i. 51. 6: "Thou didst tread down with thy foot the great Arbuda." In the same verse *Çuṣṇa* and *Çambara* are named. The adj. *arṇava*, used of Arbuda in x. 67. 12, is 'surging, waving, undulating;' i. e. Arbuda is imagined in serpentine form. Indra cuts off his head. The Pet. Dict. in both passages renders 'serpent.' This Arbudā is doubtless identical with

Arbuda, mentioned in ii. 11. 20: "When he had refreshed himself with Trita's intoxicating draught, he cast Arbuda to earth." In ii. 14. 4, Arbuda is mentioned with *Urāṇa*. According to viii. 32. 26, he is smitten by Indra with snow or ice—*himenāvidhyad arbudam*. In v. 3 we read: "Cast down the height, the pate of the great Arbuda;" viii. 3. 19: "Thou didst drive out the cows from the mountain of Arbuda, of the treacherous *Mṛgaya*."

Ahi, 'Serpent, Dragon' ("Wurm" of German mythology), designates both a demon and a mysterious being, *Ahi Budhnya*, 'the dragon of the depths.' In most cases, however, *Ahi* is the demon, identified with *Vṛtra*—cf. e. g. i. 51. 4; iv. 17. 7 ff.; vi. 72. 3; x. 113. 3; and the whole hymn i. 32—by which is signified the long outstretched cloud, or else such clouds as seem to have been rolled or coiled up. The root is *ah*, in the signification 'squeeze.' The reference is probably to snakes of the constrictor kind.

Ahiçuva, mentioned in viii. 32. 2 together with *Srbinda*, *Anarçani*, and *Pipru*. In v. 26 occur the words *āurnavābham ahiçuvam*, which Grassmann translates "the spider-brood *Ahiçuva*;" so also 66. 2. x. 144. 3: "Carelessly the bull among his females watches the busy falcon" (which brings the Soma to Indra; after

¹ ghṛṣṇh çyenāya kṛtvana āsū svāsu vānsagaḥ: āva dīdhed ahiçuvah.

the draught of which the god will overcome Ahīṣuva and deprive him of the cows). On this verse Grassmaun remarks: "According to the hymn, Ahīṣuva is doubtless identical with the *astā kṛcānus* ['the bow-stretching archer'] in iv. 27. 3." The translation which I have given, if correct, proves this conjecture wrong. No wonder need be felt that the demon is called *Vanśaga*. He is among his "cows," the clouds, and so is naturally enough styled "the bull" of the flock.

The word *āurnavābha* occurs without *ahīṣuva* only in ii. 11. 18: *āurnavābhām dānum*. The rendering 'spider-brood' is quite satisfactory; cf. Curtius, *Grundzüge*, No. 406 b. The spider was not unnaturally classed with animals under whose forms demons were thought to exist, since in hot countries spiders are not only very large and disgusting, but positively dangerous. Nor is it improbable that the poets saw a considerable degree of resemblance between certain cloud-formations and spiders' webs.

Aṣṇa ('greedy'), name of a demon in ii. 14. 5, and in ii. 20. 5: "The mighty (Indra), stealing away the dawns by means of the sun, destroyed the old hiding-places of Aṣṇa;" vi. 4. 3: "The radiant one who grows not old, who scares away (demons—Agni is meant), destroyed" etc. Who was this "greedy creature?" Indra destroys his retreats by making the sun rise; Agni does the same by his rays; so that Aṣṇa, although mentioned among rain-stealers in ii. 14. 5, was doubtless in the first instance a demon of darkness.

Ilībiṣa I find mentioned only in i. 33. 12: "Indra cast down the strongholds of Ilībiṣa." Yāska, Nir. vi. 19, makes the word equivalent to *ilābiluṣaya* 'lying in front of the door of refreshment' (i. e. of the water). The commentator adds: "He blocks up the openings by which the refreshments, the waters, flow out, and lies in front of them. It is a name for cloud." Yāska's idea may be correct; his etymology is of a sort with most of his others.

Urana, mentioned only ii. 14. 4: "Urana, who stretched out ninety-nine arms." The meaning for *urana*, 'ram,' given in Pet. Dict. for the later literature, would suit the clouds very well, as they often have a woolly appearance; hence also the "ninety-nine arms," referring to their fringe-like edges.

Aurnavābha. See *Ahīṣuva*.

Karañja: named in i. 53. 8 along with *Parṇaya*, in x. 48 with *Parṇaya* and *Vrtra*. Both are conquered by Indra with *Atithigva*'s assistance, "by means of the wheel," i. e. chariots. *Atithigva* is a surname of *Divodāsa*, for whom Indra also kills *Çambara*. *Parṇaya* is plainly enough 'the winged one;' *karañja* I can only explain as derived from *ka + rañja*, 'of uncertain color,' i. e. dark, obscure. Benfey, *Or. u. Occ.* i. 413, supposes the word to be connected in some way with *kara*, 'hail.'

¹ *muspānn usāsah sūryeṣa stavān āṇasya cīc chīṇathat pūrvyāpi.*

² *vī yā inōty ajārah pāvako 'ṇasya cīc etc.*

Kuyava. Although *kuyava* is generally to be taken as an adjective qualifying *Ḣuṣṇa* (which see below), yet the word sometimes appears to be an independent name, as e. g. in i. 103. 8: 'where the order of words forbids our taking *ḡuṣṇam* and *kuyavam* together. To be sure, *kuyavam* might here belong with *vṛtram*, but I know no other instance of *Vṛtra*'s receiving this epithet. The verse i. 104. 3 mentions two wives of *Kuyava*: "Kuyava's wives bathe in the stream of milk (i. e. rain); let them be dashed to pieces in the cataract of *Ḣiphā*" (Grassmann); i. e. they revel in the possession of what rightly belongs to mankind, but by the renewed flowing of the *Ḣiphā* they are to be destroyed. Grassmann's explanation of *ḡiphā* as name of a river is doubtless correct.

[*Kuyavāc* is mentioned only in i. 174. 7. Pet. Dict. and Grassmann derive the word from *kuya* (= *ku*) + *vāc*; hence, 'slanderer.' There is no further authority for making *kuya* equivalent to *ku*; but the meaning 'slanderer' suits the context, as the hymn mentions only earthly enemies, and particularly slanderers.]

Kāulītara, see *Ḣambara*: iv. 30, 14.

Krivi, 'leather bag, or bottle' (*ἀσμός*), i. e. the rain-cloud. In ii. 17. 6 and 22. 2, and Vāl. 3. 8 it seems to be used as name of a demon.

Cumuri: generally in the company of *Dhuni* ('the roarer'). Indra put them both to sleep, and so killed them, as a favor to *Dabhīti*. In vi. 26. 6, we find *Cumuri* alone, and *Dhuni* is not alluded to at all in the hymn; in all other passages they are mentioned together.

[*Dānava*: v. 29. 4: "Indra, bidding the swallower (i. e. him who sought to swallow him up) retire, struck down the snorting *Dānava*"—where it is indifferent whether we take *dānavam* as name or not; *ḡvasant* is applied to *Vṛtra* in i. 61. 10 *et saepp*. In v. 32. 1 *dānava* appears to refer to *Ahi*, i. e. *Vṛtra* (cf. the other verses); so also ii. 11. 10. It is evidently unnecessary to consider the word, formed as a patronymic from *dānu*, 'demon,' as a name.]

Drbhika: only ii. 14. 3. It perhaps signifies 'he who bunches clouds together.' The root *darbh* occurs, according to Pet. Dict., only in the Brāhmanas. For the form cf. *vṛdhika*, 'helper,' and Whitney, Gr., § 1186.

Dhuni, see *Cumuri*.

Namuci is explained by Pānini as from *na* + *muci*, i. e. 'he who does not let (the rain) free:' cf. K. Z. viii. 80. In the following verse the relations between the Aḡvins and *Namuci* still await satisfactory explanation: x. 131. 4: "Ye Aḡvins, lords of the

¹ ḡuṣṇam pīpruḡ kuyavam vṛtrām indra yadāvadhīr ví pūrah ḡam-barasya.

² jīgartīm indro apajārgurāḡaḡ prāti ḡvasāntam āva dānavām han.

³ yuvām surām aḡvinā nāmucāv āsuré sácā: vipīpānā ḡubhas pati indrah kármasv āvatam.

rapid flight, after ye had drunk the intoxicating draught in the company of the demon Namuci, helped Indra in his deeds." Elsewhere Namuci is always a rain-stealer. Indra strikes off his head in v. 30. 7, 8 and vi. 20. 6, or crushes it with the foam of water, v. 30. 9; viii. 14. 13. See the curious explanation of this by the commentator on V. S. x. 33, in Muir, S. T. v. 94.

Navavāstva, 'he who has a new dwelling-place.' In i. 36. 18 and vi. 20. 11 the word is plainly name of a man: in the first passage, a favorite of Agni; in the second, son of Uṣanā, a favorite of Indra. In i. 36. 18 he is also called *brhadratha*, 'having a great chariot,' so also in x. 49. 6, where Indra says of himself: "It was I, the slayer of Vṛtra, who hewed in pieces Navavāstva, even as I hewed Vṛtra" (*vṛtreva=vṛtram iva*). Hence it seems unnecessary to make *navavāstva* name of a demon.

Nārmara: only ii. 13. 8. The text has *nārmaram sahasasam*, generally translated 'Nārmara with all his possessions.' Sāyana takes *sahasasu* as name of an Asura; *nārmara* would then be patronymic from *nrmara* ('causing death to the heroes'), which need not signify a demon.

Padgrbhi, 'who seizes by the foot:' only x. 49. 5. *Savya*, into whose hands Indra delivers *Padgrbhi*, is not mentioned elsewhere.

Parnaya. See under *Karañja*.

Pipru. The word is plainly derived from $\sqrt{\text{par}}$. If from 1. *par*, the meaning would be 'the overcomer, compeller,' if from 2. *par*, 'he who satiates himself' (i. e. with the stolen waters). For the form, cf. *si-sn-u*, *ji-gy-ū*, etc. (Whitney, Gr., § 1178 c); the accent raises difficulties. In i. 101. 2, *Pipru* is called *avrata*, 'disobedient to the laws.' By the "laws" we have doubtless to understand Varuṇa's ordinance that the rain shall descend upon the earth. In iv. 16. 13 he is styled *mrgayam gñcuvānsam*, 'a mighty monster,' and Indra kills him. He appears mostly in the company of Ṣuṣṇa and Čambara, and like them is possessed of castles and strongholds, by which again clouds are meant.

Piçāci: only in i. 133. 5. The whole hymn is a prayer for the banishment of demons. Grassmann's derivation, from *piça + ac*, is doubtless correct; *Piçāci* would then be the will-o'-the-wisp.

Makha appears in two passages as an enemy of the gods: ix. 101. 13: "Drive off the greedy dog, as the Bhrgus drove off Makha" (*hatā*, 2nd plur., addressed to the gods, or to the other priests); x. 171. 2: "Thou didst rend the head of the wild Makha from his body, and enter the Soma-presser's house." In the first passage Grassmann translates *makha* by 'enemy;' in the second, by 'warrior.'

Mrga, 'wild beast,' designates in i. 80. 7 Vṛtra, who, as is

¹ ahám sá yó návavāstvam bṛhadratham sám vṛtreva dāsam vṛtrahārujam.

² āpa çvānam arādhāsam hatā makhām ná bhṛgavaḥ.

³ tvám makhāsya dódhataḥ çíró 'va tvacó bharaḥ: ágachah somíno gṛhám.

apparent from the rest of the hymn, is here thought of in animal form. So also v. 29. 4; 32. 3; 34. 2; viii. 82. 14. (Pet. Dict.) So also

Mrgaya, used iv. 16. 13 of Pipru, viii. 3. 19 of Arbuda. In x. 49. 5 perhaps proper name.

Rudhikrā: only ii. 14. 5. Grassmann, 'shedder of blood,' from *rudhi* (= *rudhira*) and *kra* (from $\sqrt{\text{kir}}$): cf. *dadhikrā*. Yet here *Rudhikrā* stands among rain-stealers, and why all at once a 'blood-shedder'?

Rāuhina is mentioned in Naigh. i. 10 as equivalent to *megha*, 'cloud.' In i. 103. 2, he is killed together with the rain-stealers *Ahi* and *Vyaṁsa*; in ii. 12. 12 he is called *dyām ārohan*, 'the stormer (assaulter) of the sky'—the Indian counterpart of the Titans. In agreement with ii. 12. 12, the root *ruh*, 'climb,' seems to underlie the word; Grassmann derives it from *rohini*, 'bay mare.'

Vaṅgrā: only in i. 53. 8, where Indra and Rjigvan destroy his hundred castles. Grassmann separates *vaṅgrā*.

Varcin: mentioned four times—ii. 14. 6; iv. 30. 15; vi. 47. 21; vii. 99. 5—each time in connection with *Çambara*. He leads 100,000 men against Indra, but is killed. Grassmann assumes for the word a root *varc*, 'glisten,' and compares *varcas* and *vr̥civat*. Roth, in a private lecture, hinted at a connection with the later word *varcas*, 'dung, filth.'

Vala signifies originally 'cave;' and by this seems to have been signified at first the cloud-cave which concealed the stolen rain-cows, and then, by a transition to a person, the demon who had his abode therein. The first meaning is exemplified in vi. 39. 2: "Indra tore open the untorn roof of the cave, he conquered the *Paṇis* by his words (alone):" cf. x. 62. 2; 138. 1; ii. 12. 3. The second we find in x. 68. 6: "When *Bṛhaspati* with fiery glowing lightning-flashes split open the hiding-place of *Vala* who jeered at him:" cf. vi. 18. 5; viii. 14. 8. But in most cases a distinction between these two meanings is quite impossible, and there are extremely few verses in which *valu* is necessarily a proper name.

Vṛkadvaras: only in ii. 30. 4; apparently an epithet of *Vṛtra*. Roth and Grassmann conjecture *vṛkadhvaras*, 'as harmful as a wolf.'

Vṛsaçipra, 'having lips like a bull.' Spoken of in vii. 99. 4 as conquered by Indra and *Viṣṇu*: "O heroes, ye destroyed in battle the stratagems of the demon *Vṛsaçipra*." Still, the word might be merely an adjective.

Vyaṁsa. The word signifies literally 'with broad (or 'crooked') shoulders.' According to iv. 18. 9, he wounds Indra. He is mentioned in some half-dozen verses, together with *Pipru*, *Çuṣṇa*,

¹ *rujád áruḡṇam ví valásya sánam paṇíh vácobhir abhí yodhad índrah.*

² *yadâ valásya píyato jásum bhéd bṛhaspátir agnitápobhir arkâñh.*

Namuci, and others; but it is impossible to determine his character more nearly. Cf. i. 101. 2; 103. 2; ii. 14. 5; iii. 34. 3; in i. 32. 5 *vyāṇsa* may be an adjective qualifying *Vṛtra*.

Çandika: only in ii. 30. 8, in plur. Probably demons rather than men. *Sāyaṇa* refers it to the descendants of *Çaṇḍa*, who appears in V. S. as leader of the *Asuras*.

Çambara appears very often, and as one of the most dangerous among *Indra*'s opponents. The word is of secondary formation, from *çamba*, which in x. 42. 7 designates a weapon used by *Indra*, and is explained in *Naigh.* and *Nir.* by *vajra*. If the word *çambara* as name of a demon retains its appellative force, then this is the only case known from the R. V. in which a demon carries the weapon peculiar to *Indra*. Still, the word *nivivīdh-vān*, used of *Vyaṇsa* in iv. 18. 9, seems to point to a regular weapon carried by the demons. Roth, *Zur. Lit. u. Gesch. d. Wēda*, p. 116, and Zimmer, *Altind. Leben*, p. 126, suppose *çambara* to have been originally a designation of some non-Aryan tribe, which was afterward transferred to certain demons.

For *Çambara* the following passages are of importance: vi. 47. 21: "In the abiding-place of the waters the hero slew the two higgling demons *Varcin* and *Çambara*." In ii. 12. 11 *Çambara* is called *parvatesukṣiyant*, 'dwelling on the mountains,' where 'the mountains' may be either those upon earth, or the thus imaginatively described clouds in the sky. In vii. 18. 20: "Thou hast killed the *Çambara*, who thought himself a little god; thou didst hurl him down from the heights"—*çambara* plainly designates a hostile, non-Aryan tribe; cf. the other verses of the hymn, and vi. 26. 5.

The clouds are called *Çambara*'s castles. *Indra* is said to have destroyed ninety-nine of them, or a hundred (ix. 61. 1, 2; ii. 14. 6); and in the latter case, ninety-nine during the day and the hundredth at evening (iv. 26. 3), as an especial favor to *Divodāsa*. According to ii. 12. 11, *Indra* found *Çambara* only in the fortieth year: i. e. it was long before the storm broke—the drought was of long duration. In iv. 30. 14, *Çambara* is called *kāulitara* ('with a numerous family?').

Çuṣṇa is, after *Vṛtra*, *Indra*'s most dangerous enemy. He is a demon of drought and bad harvest, and with his destruction fertility and prosperity return to the earth. Thus, v. 32. 4: "Him who revelled at will in these waters, the son of mist who delights to roam in the darkness, the demon's rage and *Çuṣṇa* himself, did *Indra*, the thunderer, who receives the powerful libations, destroy with the thunderbolt." The most significant of the epithets

¹ āhan dāsā vṛṣabhó vasnayántodāvraje varcīnam çambaram ca.

² dévakam cin mānyamānām jaghanthāva tmānā bṛhatāḥ çambaram bhet.

³ tyām cid eṣām svadhāyā mādantam mihó nāpātam suvīdham tamogām: vṛṣaprabharmā dānavāsya bhāmam vājreṇa vajrī nī jaghāna çuṣṇam.

applied to Çuṣṇa is *kuyava*, 'causing bad harvests.' (For *Kuyava* as an independent personification see above.) Again, x. 22. 14: "That the earth, though without hand or foot, might nevertheless prosper through the help of the glorious ones, thou didst cast down Çuṣṇa upon the right hand, to the gain of the whole world:" cf. Vāl. 3. 8. Çuṣṇa is furthermore called *açuṣa* (probably with an intentional pun upon his name), 'greedy,' a word used only of him and once (i. 174. 8) of Agni; *māyin*, 'wily' (as also *Vṛtra*); *çṛṅgin*, 'horned'; *amānuṣa*, 'hostile to mankind'; and *vrandin*, 'enervating,' which of course refers to the enervating, exhausting influence of the drought upon all living things (i. 33. 12; x. 22. 7; i. 54. 5). His cloud-castles, which wander restlessly about (*carisṇu pur*), are mentioned in i. 103. 8 and viii. 1. 28. Indra is besought to destroy his whole progeny, viii. 40. 10, 11. The act of killing him was an especial favor to Kutsa Ārjuneṣa: i. 63. 3: "For the joyful youth Kutsa thou didst smite Çuṣṇa with his wagon in his fort:" cf. iv. 16. 12; vi. 26. 3; 31. 3; vii. 19. 2.

The Pet. Dict. derives the word from $\sqrt{\text{çuṣ}} = \text{çvas}$, 'hiss,' Grassmann, from $\sqrt{\text{çuṣ}}$, 'dry up, wither,' which is found once in the Rig-Veda in composition with *prati*, and often in the Atharvan with other prepositions. For Roth's view speaks the adjective *çvasaṇa*, 'snorting,' in i. 54. 5; yet Grassmann's derivation seems to correspond better with the general conception of this demon. Perhaps even the Indians forgot at a very early date the real derivation of the word.

Svarbhānu ('he who has the sunlight in his power?') appears only in v. 40, as a demon who obscures the sun, but is slain by Indra for Atri.

¹ *aṣṭā yád apádi vārdhata kṣāḥ çacibhir vedyānām: çuṣṇam pári pradakṣiṇíd viçvāyave ní çignathah.*

² *tvám çuṣṇam vṛjáne prkṣá āpáu yúne kútsāya dyumáte sácāhan.*

INDEX TO PASSAGES TRANSLATED OR EXPLAINED.

R. V.	Page.	R. V.	Page.	R. V.	Page.
i. 6. 3	126	ii. 12. 2	183	iv. 24. 10	196 f.
13. 10	147	7	185	28. 1	164
17. 3	154	13	121	30. 18	181
6	154	13. 6	185	22	185
18. 4	166	7	185	32. 17-21	186
20. 2	178	10	183	22	131
33. 1	187	12	189	33. 9	177
12	200	14. 4	200	35. 7	178
51. 4	184	15. 2	122	41. 2	155
6	199	7	190	42. 1-10	156 f.
13	189	20. 5	200	4	122
52. 6	136	8	137	57. 7	191
7	175	28. 4	134		
11	194	30. 1	185	v. 2. 8	152, 172
14	186	2	130	5. 3	169
53. 10	181	3	136	29. 4	201
54. 1	121	6	164	7	171
55. 1	121	10	179	10	189
4	120	31. 1	178	30. 6	138, 161
56. 4	131	34. 10	145	31. 4	178
5	122, 182	14	143	8	189
61. 7	174	40. 2	191	11	184
62. 3	141			32. 3	136
9	187	iii. 12. 6	171	4	204
63. 3	205	9	171	10	121
80. 12	137	30. 12	184	40. 6	184
83. 4	141	13	184	51. 10	151
84. 13	138	32. 6	135		
100. 5	161	34. 4	139	vi. 4. 3	200
101. 7	161	10	185	17. 10	176
102. 2	184 f.	35. 9	169	11	191 f.
103. 3	180	47. 4	161	18. 2	121
104. 3	201	48. 4	176	6	186 f.
105. 9	144	53. 1	182	19. 7	187
108. 1	170	4	169	20. 2	173
3	170	55. 19	147	22. 10	181
109. 4	170	57. 2	191	27. 3	195
111. 1	177 f.			31. 2	121
116. 21	192	iv. 16. 4	184	37. 2	165
121. 10	139	8	141	39. 2	203
11	135	17	179	45. 1	189
122. 3	181	17. 2	125	47. 21	204
131. 5	180	4	125	56. 2	191
132. 6	182	6	187	57. 2-4	190 f.
133. 1-3	140	7	135	59. 1	130
135. 8	163	12	125	2	130, 132
155. 2	174	18. 1-5	127	60. 2	171
170. 2	161	3	176	68. 2	155
171. 6	161	8	127	3	151
187. 1	142	10-12	127	69. 2	173
188. 9	147	19. 7	190	8	174
		9	190	72. 1-4	164
ii. 11. 7, 8	136	21. 4	162		
10	164	22. 4	126	vii. 6. 1	168
19	143	7	138	18. 20	204
20	143, 199	24. 1	131	20. 5	129

R. V.	Page.	R. V.	Page.	R. V.	Page.
vii. 21. 3	135	viii. 40. 5	171	x. 49. 10	177
26. 4	195	45. 4	128	52. 5	171
28. 4	153 f.	5	128	54. 3	132, 183
32. 18	188	58. 4	130	5	185
19	188	15	129	66. 3	178
47. 2	178	59. 4	126	68. 6	203
56. 2	131	63. 10	168	73. 1	130
79. 3	168	65. 4	139	4	192
82. 2	155	66. 1	131	10	130
3	154	1-3	128	86. 11	196
5	155	5	167	89. 4	183
6	155	10	175	8	152
83. 9	155	81. 14	131	92. 8	121
84. 2	153	30	188	95. 7	129
85. 2	155	82. 5	195	101. 12	131, 149
3	154 f.	85. 3	161	111. 2	132
4	150	6	152, 186	4	199
90. 5	163	7	137	6	138
97. 9	168	15	166	113. 3	135
98. 3	150	87. 2	185	4	182
99. 3	124	91. 8	147	5	152
4	173, 203			8	138
5	173	ix. 83. 4	168	120. 1	130
104. 22	140	86. 1	143	6	142
viii. 1. 5	197	99. 3	165	124. 1-9	159 f.
11	167	101. 13	202	131. 4	192, 201 f.
3. 19	199			5	192
6. 28-30	126	x. 10. 15	147	134. 1	129
7. 24	142	17. 3	191	138. 6	185
31	161	22. 1	153	139. 4	167
12. 6	138	14	205	6	167
14	150	28. 6	129	144. 3	199 f.
16	143	7	137	153. 1	129
30	185	32. 6	172	2	131
14. 14	140	38. 5	181	167. 1	165
15. 2	183	45. 3	169	171. 2	202
32. 3	199	46. 3	142 f.		
36. 4	183	48. 2	143	Val. 3. 8	183
38. 1	169	11	178	4. 3	153, 173
		49. 6	202		

ERRATA.

p. 138, l. 42: *for* 130. 13 *read* 130. 3.
 151, 33-4: *for* viii. 82. 6 *read* vii. 82. 6.
 199, 10: *for* 111. 14 *read* 111. 4.

SYNOPSIS OF THE FOREGOING ARTICLE.

	Page
I. Introduction; Indra's Significance in Nature,	117
II. Indra's Origin,	124
Physical Conceptions,	125
Anthropomorphic Conceptions,	127
Vague Statements concerning Indra's Parents,	129
Conceptions of Indra's Origin which rest upon Speculation,	130
III. Fields of Indra's Activity, and his Relations to other Divinities and to his Worshipers,	133
Battles with Superhuman Enemies, particularly with Demons who steal Water and Light,	133
Saramā, the Angirases, and the Panis,	140
Indra and Trita, Viçvarūpa,	142
Indra's Relations with the Adityas, and the development of the Indra-mythus,	148
Indra and the Maruts,	160
Indra and Vāyu,	162
Indra and Soma,	163
Indra and Bṛhaspati (Brahmanaspati),	165
Indra and Gandharva,	166
Indra and Agni,	168
Indra and Viṣṇu,	172
Indra and Tvastar,	175
Indra and the Rbhus,	177
Indra as Chief of the Vasus,	178
Indra's Battles with Human Enemies,	179
Indra and Parvata,	181
Indra's Cosmogonic Labors,	182
Indra's Benevolence, and his Relations with his Worshipers,	186
Indra and Pūṣan,	190
Indra and the Aṅvins,	192
IV. Descriptions of Indra's Person,	193
APPENDIX: Demons mentioned by name, with whom Indra fights,	199
INDEX to Passages translated or explained,	206

ARTICLE VI.

THE CYPRIOTE INSCRIPTIONS
OF THE
CESNOLA COLLECTION IN NEW YORK:

BY PROF. ISAAC H. HALL,
OF NEW YORK CITY.

Presented to the Society May 7th, 1884.

THE object of this paper is to present the results of a fresh study of the inscriptions, and especially to correct sundry current mistakes. It has especial reference to the last general re-working of the subject of the Cypriote inscriptions, which appears as *Heft I.* of Dr. Hermann Collitz's *Sammlung der Griechischen Dialekt-Inschriften*, under the title of *Die Griechisch-Kyprischen Inschriften in Epichorischer Schrift*, by Dr. Wilhelm Deecke (Göttingen, 1883).

In essaying to offer emendations, I shall not generally stop to explain the source of error, nor to correct the (few) false references and clerical errors.

Dr. Deecke's work, in general, displays a marked advance in deciphering and interpretation, and is characterized throughout by learning and ingenuity. He gives the inscriptions in a Roman transliteration, line for line, followed by the Greek reading, in which also the line is marked. In the Roman syllables, he prints in Italic type those which he considers plain and correct on the monuments, but those that he regards as defaced or needing emendation he gives in Roman letters. The Greek that corresponds to the latter he prints in type with scratched faces.

This distinction would be a very desirable one, if it could be always made; but I have not found it generally to conform to fact, since Deecke frequently uses the Roman letters where

Italic ought to be, and sometimes *vice versâ*. Accordingly, I shall make no thorough attempt to revise his representations in that respect, nor shall I follow his plan myself. There is, furthermore, a difficulty, sometimes, in determining whether a syllable should on that plan be printed in Roman or in Italic; and the judgment of different eyes or interpreters would greatly vary.

For convenience, and for the sake of avoiding a multiplication of references, I shall follow Deecke's order and numbers. References to "Hall" denote my own numbers in Jour. Amer. Or. Soc., vol. x.

Where the readings here given differ from those previously published by me, it is to be understood, of course, that the present ones are the result of better knowledge, and to be preferred to the former ones. In many cases the stones, after ten or twelve years' exposure to the upper air, show their characteristics much better than when fresh from the ground. In some cases cleaning an object has brought to light an inscription; in others, it has made the inscription more legible.

INSCRIPTIONS FROM KYTHREA.

1. Deecke is mistaken in speaking of "das sonderbar geformte vierte Zeichen der zweiten Zeile." The character is plain, and of the usual form; though a crack in the stone may have deformed the squeeze which primarily supplied Deecke's authority. I should put none of the syllables in Roman letters, since all are unmistakable. The inscription is on one side of a stone box, of a sort of which quite a number of specimens appear in the Cesnola collection, some of them smoked inside, and probably intended for coals and incense. Characters $\frac{1}{4}$ to $\frac{1}{2}$ inch high. Three lines. It reads:

1. *po.ro.to.ti.mo.e.mi.ta.se.pa.pi.a.se.to.i.e.*

2. *re.wo.se.ka.se.mi.ka.te.te.ke.ta.i.*

3. *pa.pi.a.i.a.po.ro.ti.ta.i.*

*Πρωτοτίμω ἡμὶ, τὰς Παφίᾳς τὰ ἱε- | πέρος, καὶ μὶ κατέ-
θηκε τᾷ Παφίᾳ Ἀφροδίτῃ.*

'I am [the offering] of Prototimos, the priest of the Paphian, and he laid me up to the Paphian Aphrodite.'

The *μ* in line 2 may be either (epigraphically) dialectic for *με*, or for *μ(ν)*. The latter seems to follow the analogy of No. 45.

2. In the first line, Deecke romanizes *te.o.ta*. The *te.* is gone; enough of the *o.* is left to show the character in the connection; but the *ta.* is quite plain, and should not be romanized. Otherwise Deecke is right.

The inscription is on a fragment of a box like the preceding. Characters $\frac{1}{4}$ to $\frac{1}{2}$ inch high. Three lines.

1. *ta.se.[te.]o.ta.se.pa. . . .*

2. *a.u.ta.ra.mi.ka.te. . . .*

3. *o.na.si.te.mi.se. . . .*

Tās [θε]ῶ τās Πα[φίας ἡμί] | αὐτὰρ μι κατέ[θηκε] |
’Οναςίθεμις . . .

‘Of the goddess the Pa[phian am I;] but Onasithemis [laid] me up . . .’

3. In line 1, the second *se.* is certain, though the last stroke (the long one) is broken away. Deecke’s romanized *u.* in line 2 is a plain *i.* on the stone; but Deecke is probably right in emending it, though it may have been phonetically correct to the stone-cutter. (In the East the *u*-sound, as well as the *ū*-sound, continually degenerates into the *i*-sound in colloquial use.) On an object like the last, but in four lines, instead of three as Deecke gives it. Characters $\frac{1}{4}$ to $\frac{1}{2}$ inch high.

1. *ta.se.te.o. | ta.se. . . .*

2. *a.i.ta.ra.e (or, me.?). . . .*

3. *te.mi. . . .*

4. *pi. . . .*

*Tās θεῶ τās [Παφίας ἡμί] αὐτὰρ με (or, αὐτὰρ ἐμὲ) [κα-
τέθηκε] ’Οναςί- | θεμις . . . Πα- | φί[αι] . . .*

‘Of the goddess the [Paphian am I; but Onasi]themis [set me up to the Pa]phi[an Aphrodite].’

4. Deecke is right in his identification. Cesnola’s copy (*Cyprus*, Plate 8, no. 53) is bad; but Pierides is right. The *se.* at the beginning should have been romanized on Deecke’s principles, since only one stroke of the character remains. Of the inscription, however, nothing is “sehr schwach” but the *e.* Half of the *mi.* at the end is broken away, and the character should have been romanized; but of these matters Deecke was, of course, not aware.

Inscription on a fragment of like description with the preceding. Characters $\frac{1}{2}$ to $\frac{3}{4}$ inch high. One fragmentary line.

. . . se.pa.pi.a.se. | e.mi. . . .

[Tās Παφίας ἡμί] . . .

‘Of the Paphian am I . . .’

5. The point “hinter *se.*” is plainly a division-mark, contrary to Deecke’s opinion. Another division-mark appears also at the beginning of the inscription, i. e. before *ta.* Also a clear fragment of a *se.* ends the line; of which fact no hint is given by Deecke.

Inscription on object like the last. One fragmentary line. Characters $\frac{1}{4}$ to $\frac{1}{2}$ inch high.

. . . | ta.se. | pa.pi.a.se. . . .

. . . τās Παφίας . . .

‘. . . of the Paphian . . .’

6. Deecke’s first romanized *se.* is pretty certainly wrong. The character is fragmentary, but pretty plainly *mo.*, followed by

a division-mark. A division-mark occurs also after the last character.

Inscription on object like the last. One fragmentary line. Characters $\frac{1}{2}$ to $\frac{3}{8}$ inch high.

... *mo.* | *pa.pi.a.se.* |

... [*? Πρωτοτί*] *μω Παφίας* ...

'... Of Prototimos (?) Paphia's ...'

Still, it is possible that the reading was ... *τα̃ς Παφίας* ...

7. Deecke is right, even in tacitly noting that we have here the beginning of an inscription.

On a fragment of a large bowl or jar of red earthenware. Inscription in characters $\frac{3}{4}$ to 1 inch high.

ta.se.pa.pi. ...

Tās Παφί[ας] ...

'Of the Paphi[an] ...'

8. There is nothing in the collection to answer to this inscription. I presume it is Pierides's first or second copy of Deecke's No. 4, above, when the fainter *e. mi.* at the end escaped his attention. I had from Gen. di Cesnola squeezes of this whole lot of Kythrea inscriptions, made at the time of their discovery, and given to me at the same time that Pierides saw them; and this was not among them. It also makes one more (and, with No. 14, two more) than the number of them as then stated by Gen. di Cesnola, or than the number which I have known ever since. Consequently, I consider that this inscription is to be counted as non-existent, and to be erased.

9. Deecke is wrong in some comparatively minor matters. The first character is *ta.*, not *se.*; and the *a.* is the end of the original inscription. Deecke's comment is all wrong.

Inscription on the side of a flat-bottomed basin of red pottery. One (end of a) line. Characters $1\frac{1}{4}$ to $1\frac{1}{2}$ inch high.

... *ta.pa.pi.a.*

... *τα̃ Παφία* (*i.e. τα̃ Παφία*).

'... to the Paphian.'

The absence of the *iota* adscript is easily explained on the supposition that the epithet was preceded by *τα̃ι Ἀφροδίται*.

10. Deecke is right in his comment. The *pi.* has been made an *o.* by a superfluous line. But, contrary to Deecke's indication, we have here the end of the original inscription.

Inscription on fragment of an incense box of soft stone, like Nos. 1-6. One (end of a) fragmentary line. Characters $\frac{3}{8}$ to $\frac{1}{2}$ inch high.

... *pa.pi.a.se.*

... *Παφίας.*

'... of Paphia.'

11. Deecke is wrong in several respects; but it is probable that his identification of this with "*Pier. Trans. V.*, p. 96, n. 11 f.," is correct.

The inscription is in two lines, fragmentary, but probably the beginning of the second line is present. There is no reason for reading from left to right, as Deecke does. Nor is there any point between "*pi*. [which I read *o*.] and *a*;" but the "Anfang eines Striches unter *pi*." is really there (not a chance scratch), and makes it an *o*.

Inscription on a fragment of like nature with the last. Two fragmentary lines. Characters $\frac{5}{8}$ inch high.

1. . . . *se. te.*

2. *a. o. . . .*

. . . . *τᾱ[ς θε[ω̃ . . .] | α ο . . .*

'of the goddess (?)'

12. All the characters in this inscription should have been romanized on Deecke's method, for they are all broken on the lower side.

On an object like the last. One fragmentary line. Characters $\frac{5}{8}$ inch high.

. . . *pa. pi. a. . . .*

. . . *Παφία[ς?]* . . .

' . . . of (or, perhaps, to) Paphia. . . . '

13. Deecke is all wrong, except in the two last characters.

Inscription on a large fragment of calcareous stone, in one fragmentary line, 1 foot 8 inches long. Characters 4 to 6 inches high, deeply cut, but the first three much worn.

. . . *se. ka. te. ke. a. . . .*

. . . *ς κα̃ θήκε 'Α . . .*

' . . . and — set me up to A[pollo?] (or Aphrodite?) . . . '

14. Deecke's remarks about the variance between the "Zeichnung," the "Text," and the "Umschreibung" are just enough; but the fact is that the "Zeichnung" in Pierides's Plate "A-5." is altogether wrong, and represents an inscription quite different from any of these Kythrea inscriptions. Whether the mistake is Pierides's own or that of the editor of the Journal, is uncertain. (See foot-note, p. 96, *Jour. Soc. Bibl. Archæol.*, vol. v.) The "Text" is palpably misprinted. What Pierides's "11 a" is, is not so certain; but Deecke's 5, 6, for which he does not cite Pierides, certainly represent two of Pierides's numbers.

To make the matter clearer, I will state that the group of small Kythrea inscriptions found by Gen. di Cesnola in 1876 are eleven in number, three longer, and six mere fragments, on stone, and two on pottery. I have known all these inscriptions ever since their discovery, and they are the same that Pierides describes, though it is difficult to identify each of those he has grouped under his No. 11, even with the stones to help. This group does not include Deecke's No. 13, which, though from Kythrea, was found at another time, and is on a large stone. We have to reject Deecke's Nos. 8 and 14, as non-existent.

For presenting the matter more clearly, I append the following

tabular statement of agreement between Deecke and Pierides, as the result of the most careful examination I could make.

Deecke 1	=	Pierides No. 8.
2	=	9.
3	=	10.
4	=	11 d.
5	=	11 a.
6	=	11 b.
7	=	12 b.
(8	=	11 d., repeated,
and therefore to be erased.)		
9	=	12 a.
10	=	11 c.
11	=	11 f.
12	=	11 e.
(13 is not of this group.)		
(14	=	11 a., repeated,
and therefore to be erased.)		

KŪKLIA, OR PALÆO-PAPHOS.

37. (Hall, No. 24.) In respect to this inscription, I now agree with Deecke in the reading of the second character in line 1. Inscription on the (calcareous stone) base of a statue, with feet still remaining. Divisions between the words are not marked with points or lines, but indicated by spaces. Three lines. Characters about $\frac{1}{2}$ inch high.

1. *e. po. to. se. ka. te. se. ta. se. to. i.*

2. *ti. o. i. ta. pi. te. ki. si. o. i.*

3. *i. tu. ka. i. a. za. ta. i.*

Ἐφῶδος κατέστασε τῶι | θιῶι τὰ πιδεξίῳι | ἰ(ν) τύχαι ἀζαθαῖ.

‘Ephodos erected [this statue] to the auspicious god, in good fortune.’

This rendering, which seems the only proper one, and which avoids more difficulties than any other, assumes either that the engraver omitted a short stroke in the fourth character of line 2, thus leaving it *ta.*, instead of making it *to.*; or else that *ta. pi.* in Cypriote is equivalent to *τῶ ἐπὶ* in ordinary Greek (to read it *τᾶ(ι) πιδεξίῳι*, and consider the divinity feminine, seems forbidden by the *τῶι* in line 1—unless that is a mistake, and the offering is to Aphrodite). In the former case, *τὰ πιδεξίῳι* is to be corrected to *τῶ πιδεξίῳι*. Another view, which is apparently Deecke’s, takes this group of characters as equivalent to *τὰ ἐπὶ δεξίῳι* [*μέρει*]; in which case the translation would be: ‘Ephodos erected to the god the objects on (at? in?) the right hand [portion]:’ namely, of the temple.

114. This number is here inserted, out of its order, as it is out of place in Deecke. The inscription is on a block of calcareous

stone, from Palæo-Paphos, where I first saw it. The inscription is in three lines (not two, as Deecke gives it), each 6 inches long; and perhaps is complete, though another line, or at least a character or two more, seems to be required by the sense. Characters $1\frac{1}{2}$ to $1\frac{3}{4}$ inch high; plain, except that the last two in line 2, and the first two and the last one in line 3, are damaged.

1. *ki. si. ka. se.* *Κίσσικας* (or *Ξίχας*, or *Ξίγας*)

2. *o. ti. mo. to. ro.* *ὁ Τιμοδώρω*

3. *a. po. se. ia. . . .* *αποσεία. . . .*

'Kissikas (or Xichas, or Xigas) the son of Timodoros, for expiation . . .'

CURIUM AND VICINITY.

43. (Hall, No. 33.) In the years that have elapsed since my first (necessarily hurried) reading of this inscription, the inscription has become plainer, by drying more thoroughly; and I have to change my former reading. The inscription is on the base of a statuette of calcareous stone, from the temple of Apollo Hylates, near Curium. Inscription $4\frac{1}{2}$ inches long. Characters $\frac{1}{2}$ inch high, all plain, except that the first and last are somewhat faint, and the plainly cut character that is here read as *te.* may be *ni.* or *pu.* Reads from left to right.

pa. i. na. le. o. te. se.

Φαιναλεότης (or *-οτής*).

Proper name, probably genitive of the offerer, 'Phainaleote.' But it may be read as nominative, 'Phainaleotes.' Also, as *Φαιναλέονις* or *Φαιναλέοπις*.

44. (Hall, No. 34.) Like the last, on the base of a statuette from the temple of Apollo Hylates, near Curium. Inscription now $2\frac{1}{2}$ inches long, but must have been an inch longer toward the left, and included one character more toward the right. Characters $\frac{1}{2}$ inch high; all plain, except that from the varying depth of the strokes it is doubtful whether the second character from the left is a division-mark or the character *to.* Reading from left to right (as most of the legible inscriptions from this place do), the characters are:

. . . *i.* | (or *to.*) *va. re. pa. li. we. . . .*

For which [*Ἀτόλλωνι Διῶ*]; *ἐΑρηβαλίην[ς]* is as good a conjecture as I can offer.

45. (Hall, No. 32.) On a pedestal of calcareous stone. Inscription in 4 lines, each one foot long, except the last, which is $3\frac{1}{2}$ inches. Characters $\frac{3}{4}$ to $1\frac{1}{4}$ inches high; nearly all in the first line somewhat obscure, and the lower part of the last three in line 4 broken away. Otherwise plain, and the reading certain. My former reading of this inscription has to be corrected in sundry points. The stop at the end is a circle, not a straight mark.

1. *a. ri. si. to. ko. ne. to. o. na. si. ri.*

2. *u. e. u. ka. sa. me. no. se. pe. ri. pa.*

3. *i. ti. to. i. pe. re. se. u. ta. i. u. ne. te.*

4. *ke. i. tu. ka. i.*

With Voigt, I am inclined to think that the first *u*. in line 2, and the last *u*. in line 3, should be corrected to *mi*., since they lack only a lower stroke to make the latter reading. Without this correction, the reading is:

*Ἀριστόγων τῷ Ὀνασίρι | εὐεξάμενος περὶ παι- | δὲ τῷ
Περσεύται ὑνέθη- | κε (or ὕν ἐθη- | κε) ἰ(ν) τύχαι.*

‘Aristogon, having vowed in company with [and] for his son Perseutas, in company with him offered [this] to Onasiris in good fortune.’

With the emendation, the reading is:

*Ἀριστόγων τῷ Ὀνασίρι | μι(ν) εὐεξάμενος περὶ παι- | δὲ
τῷ Περσεύται μιν ἐθη- | κε ἰ(ν) τύχαι.*

‘Aristogon having vowed me concerning his son Perseutas offered me to Onasiris in good fortune.’

Here *μι* or *μιν* is the acc. sing. of the first personal pronoun, as in some of the Kythrea inscriptions.

The dative *o.na.si.ri*. occurs on two other Cesnola inscriptions, and is shown to be an epithet of Apollo.

46 and 47. The votive armlets of Etevander, from the treasure of Curium. The two inscriptions read the same, but one is 4 inches long, with characters $\frac{1}{4}$ inch high; the other is $3\frac{1}{2}$ inches long, with characters $\frac{1}{2}$ inch high. The characters are as plain and fresh as when first cut—with a hammer and small chisel. It is also plain that some false strokes made in cutting some of the characters were hammered out by the engraver. On one of the armlets, the character for *se*. is turned in a direction opposite to that in which it appears on the other. In one, the perpendicular stroke of the character *pa*. goes from top to bottom, crossing the horizontal strokes. On the other armlet the perpendicular stroke appears only above the upper, and below the lower, horizontal line, not crossing them, but leaving the space between them clear. Read from left to right:

e.te.va.to.ro | to.pa.po.pa.si.le.wo.se.

Ἐτερά(ν)δρω τῷ Πάφῳ βασιλέως.

‘Of Etevandros, king of Paphos.’

It may be further remarked that this Etevander king of Paphos was one of those who sent his submission to the Assyrian Esarhaddon; that these two armlets are of very fine gold, hammered out from solid ingots, and show no wear on the inside, as they would if they had been worn. They were doubtless votive offerings only. Their weight is just two pounds avoirdupois.

48. On a fragment of calcareous stone. Inscription in 3 (not 2, as Deecke) fragmentary lines. Characters $4\frac{1}{4}$ to $3\frac{1}{2}$ inches high, deeply cut, and plain, though the surface is much damaged.

1. *ka.e.wo. . . .*

2. *me.ki. . . .*

3. *pa (or, lo.) . . .*

Perhaps the lines are also fragmentary at the beginning. Deecke's reading is all wrong except the first and last characters of line 1. Too fragmentary to render satisfactorily.

49. Here Deecke is nearly all wrong. The inscription is in one fragmentary line, on a fragment of pedestal of calcareous stone, deeply cut. Characters 2 to 3 inches high, a little worn, but plain. Reads probably from left to right.

... *pa. ti. sa. to. ro.* ...

(There are no division-marks, as Deecke represents.) Probably the genitive of a proper name ending in *-άνδρω*; but there is not enough to go farther with certainty.

50. This is, in all probability, on the base of one of several statuettes which bear a Cypriote inscription. They are all from the temple of Apollo Hylates; and consequently this would be out of its place here according to Deecke's arrangement. The one which seems to me nearest this one is in one line, about half of it gone, but the remnant 2 inches long. Characters $\frac{1}{4}$ inch high, generally hard to read, and might easily get into the shape in which Deecke (after Siegmund) gives it. Reads from left to right.

... *ke. to. te. a. po. lo. ni.* ...

... *ἀνέθηκε τὸ(ν)δε Ἀπό(λ)λωνι...*

... offered this to Apollo ...

51. This gem, which I first saw in Cyprus in 1875, is still a puzzle to me. Deecke's reading:

te. | sa. ? te. ? lo. ti. mu. |

is wrong in putting in the first division-mark.

The "*sa.*" I am in doubt about. It may be nothing but a division-mark; but the division-mark and the "*sa.*" are not both there. Otherwise I cannot absolutely disagree with Deecke, except that I do not feel sure that it reads in the direction he takes it. Also, the character he calls "*ti.*" may be something else; *ko.*, or *ka.*, or even *su.*, for instance. The inscription is on a gem which is best figured in Cesnola's "Cyprus," Plate XLI. (XI. *a* of Cypriote gems); but there the first "?" of Deecke's reading is poorly figured, giving undue prominence to the lower strokes, which can hardly be seen on the stone. The character may be *ta.*, or *to.* I have a strong feeling that the reading is

te. ke. to. te. a. mu. ko. lo. |

where Deecke's "*sa.*" becomes an imperfect *ke.* (changing the position of reading), and letting his *lo.* and *mu.* exchange readings, as may easily be done in the case of characters in their position (which is +, and which ×, is doubtful). Then the reading would be:

θηκε τὸ(ν)δε Ἀμυκλῶ;

but so much is doubtful that I dare not venture this with confidence. The *a.* here may be a Phœnician letter, which would partly agree with King's conjecture (Cesnola's "Cyprus," p. 389). But I am not at all satisfied that King is thoroughly right in supposing the characters to be more like Numidian Punic than Cypriote.

52. On a terra-cotta tile, or rather, washing-board, such as is used in Cyprus to-day. Inscription made by the finger while the clay was soft. Near one end are the two characters, $3\frac{1}{2}$ and $5\frac{1}{2}$ inches high, respectively. Deecke is hardly right in the reading. Much rather it is *ti.ko.*, though the last syllable may possibly be *po*.

Near the middle is also the character *we*. (neglected by Deecke), $1\frac{1}{2}$ inch high. Initials, or maker's marks, probably. (At this point, see also no. 79.)

AMATHUS.

55. This inscription I cannot certainly identify, but from all the reasons which I can bring to bear, I must conclude either that it is lost, or that it has been confounded with one from Golgoi, to be hereafter mentioned. If it is really from Amathus, and lost, I can do no better than confirm Deecke's reading:

... *mi.pi.*? ...

the last (third) character wholly uncertain. It is to be noted, also, that the copy (in Cesnola's "Cyprus," Plate 8, no. 60) on which Deecke relies, and the only one extant, was made before the inscriptions could be read.

MARONI (MARIUM?).

56. (Hall, No. 30.) On the alabaster vase (or other utensil), which has been figured in various places. Deecke's reading is right, correcting sundry previous mistakes. Especially it is to be noted that he is right about the syllable *za*. in line 2, which was read differently by others, myself included. All the strokes are there to make the character perfect. Characters in fine strokes, $\frac{1}{4}$ to $\frac{1}{2}$ inch high, plain. Reading from left to right.

1. *pa.po.i.ke.*

2. *e.u.za.we.i.te.*

Πάφοι γε | εὖζαφεῖτε.

'Live well, ye Paphians.'

Probably the Paphians are worshipers of Paphia, rather than actual inhabitants of Paphos.

It should be stated that the so-called vase has no bottom, but that the article is carved with sides quite thin at the base, as if a horn or trumpet were aimed at.

GOLGOI.

66. (Hall, No. 4.) Bilingual. On a large block of calcareous stone.

Greek, one line, *ΘΕΜΙΑΤ*:

i. e., 'Of Themias.'

Cypriote portion: 3 lines, each $5\frac{1}{2}$ inches long, broken off at the ends. Characters $\frac{3}{4}$ to $1\frac{1}{4}$ inch high.

1. *ne.a.te.ro.wo.o.* . . .

2. *ka.to.ti.* (or *si.?*) *.o.* —? . . .

3. *to.i.pa.se.o.* —? —? . . .

Too fragmentary to render with satisfaction; but Deecke is wrong in a number of points, as will appear on comparison. (The notation —? denotes a character of which traces are left, but undistinguishable.)

67. (Hall, No. 3.) On a large block of calcareous stone. Bilingual. Greek:

1. TIMOΔΟΡΟΥ ΔΕΙΔ

2. ΔΡΙΜΟΚΙΑ ΔΡ

3. ΕΠΙΛΑΤΩ

Which seems to mean that Timodoros bought for Drimokia (a local deity, apparently) offerings whose numbers or quantities are expressed in the characters at the end of the lines. The character at the end of the first word in the first line is a Cypriote *se*. (=Σ final). The character at the end of line 2 is a Cypriote *ta*.; and that at the end of line 3 is a Cypriote *we*., or else a Greek Ζ.

Cypriote portion: two fragmentary lines. Characters 1 to 2 inches high; plain, except where they are broken away.

1. *te.re*. . . .

2. *ta.pi*. (or *o*.) . . .

Too fragmentary to render satisfactorily.

Deecke is quite right, except that he has an ω for o in the first Greek line.

68. (Hall, No. 13.) This is the longest of the Cesnola inscriptions. Four lines, 12½, 11½, 11½, and 12½ inches long, respectively. Characters ¾ to ¾ inches high. Better cleaning has shown that the figure above the group, which was sometimes supposed to be a sphinx, sometimes an eagle, is a chariot (with wheel gone), drawn by four winged horses. This, unlike the lower parts of the sculpture, is not only in relief, but a relief so high as to possess a top, front, and rear view. The four horses' heads are seen from their front (the right-hand side of the sculpture), their backs and the hollow box of the chariot from above, and their hind-quarters, with the rear opening of the chariot, from their rear (the left-hand side of the sculpture). During the long time that has elapsed since this stone was exhumed, matters have become clearer; time bringing out the characters, like those of a palimpsest. Every character is now plain, except that (what I still consider) the last *i*. in line 2 is partly broken away, so that there is room for Deecke's conjecture that it is *sa*. But it seems to me to be a plain *i*.; it cannot be *ke*.

Deecke's *pe*. in various places is an arbitrary reading. He may be right, but the character is everywhere an unmistakable *po*., as the engraver made it. Also, Deecke is wrong in supposing that there is no division-mark between the first *ti*. and the following *wa*. in line 1. In the last line, what I formerly read *po.ro.po.* | *o.i*. I now see to be *po.ro.ne.o.i*.; what I took for a division-mark being only part of the *ne*. Also, the first *i*. in line 3 is not *te*., as I once thought. The following is the inscription:

1. *ka.i.re.te. | ka.ra.si.ti. | wa.na.xe. | ka.po.ti. | we.
po.me.ka. | me.po.te.we.i.se.se. |*
2. *te.o.i.se. | po.ro.a.ta.na.to.i.se. | e.re.ra.me.na. |
pa.ta.ko.ra.i.to.se. |*
3. *o.wo.ku.re.ti. | e.pi.si.ta.i.se. | a.to.ro.po. | te.o.
i. | a.le.tu.ka.ke.re. |*
4. *te.o.i. | ku.me.re.na.i.pa.ta. | ta.a.to.ro.po.i. |
po.ro.ne.o.i. | ka.i.re.te.*

I cannot see that Deecke's hexameters are clear, according to this, the true reading.

There is great latitude in the possibilities of transliteration and interpretation, but I do not yet find any result that is entirely satisfactory; nor can I agree with Deecke's forcing the reading of some of the characters, as I might do if his results were perfectly self-commending.

I can hardly help agreeing with Deecke's *Καρσιφάναξ* in line 1, with the meaning he has explained of 'Lord of Cyprus;' but I would write it either *Κάρσι-φάναξ*, or the same (*i. e.*, in two words) with the hyphen omitted. But there is a temptation to read it in other ways, as *Χαρᾶς ἰθι, φάναξ* ("For joy's sake come, O Lord!"); and then, instead of *πότι* in the same line, to read *φωτί* ('and to man let me speak a great thing,') etc. However, the following is a provisional rendering:

1. *Χαίρετε· Κάρσι-φάναξ καὶ πότι, εἴπω μέγα· μὴ ποτ' ἐρείσης*
2. *Θεοῖς πρὸ ἀθανάτοις ἐβραμμένα πά(ν)τα χάραϊ δῶς·*
3. *οὐ γάρ τι ἐπισταῖς ἀ(ν)θρώπῳ(ν) θεῶι, ἀλλ' ἔτυχ' ἄ κῆρ*
4. *Θεῶι κυμερῆναι πά(ν)τα τὰ ἄ(ν)θρωποι φρονέωι.
Χαίρετε.*

'Hail! Prince of Cyprus and Lord, I speak a great thing: Do not thou on an equality give to the country all things that are dear to the gods [who] before [it were] immortal; for in nothing of men (or, of man) mayest thou set thyself over the divinity, but to the divinity Fate has allotted to control all things that men think.'

The sentiment in the last two lines, and the relative position of Fate and Divinity, have a close parallel in Plato, *Laws*, 704, b. (this was pointed out to me by Prof. A. C. Merriam).

I forbear to give further renderings, which have more or less satisfactoriness. The main thing I wish here to insist on is the correctness of the syllables as above given. Even the broken place in line 2 is now clear, being shown, among other things, by the color which, originally spread over all the stone, is now preserved in the strokes of the letters, where the surrounding surface of the stone is worn down, and the surrounding color thus obliterated.

69. (Hall, No. 2.) In this inscription Deecke is right in reading the 13th character as "ke.", but it may be written *ke.*, on his principles. Inscription on a pedestal (not altar) of calcareous

stone, such as abound in Cypriote remains, and are abundantly proved to be mere pedestals. Characters $\frac{3}{8}$ to $\frac{1}{2}$ inch high. Inscription in one line.

ti. mo. ta. ti. pa. to. | ti. ma. o. pa. pi. iu. ke. ti. mo. o. i. se.

I see no reason for disagreeing with Deecke's rendering, which is very happy, and deserves the thanks of all decipherers.

Τιμῶ τὰ(ν) δῖφατο(ν) δῖμαό(ν) Παφία(ν) γε διμῳοῖς.

'I honor the double-named, double-mothered Paphia with double songs.'

(For explanation of the new words, see Deecke, *Nachträge zur Lesung d. epichor. Kyprisch. Inschrift.*, in Bezzenberger's *Beiträge zur Kunde d. indogerm. Sprachen*, vol. vi., p. 146, 147.)

70. (Hall, No. 14.) On the fragment (sawed-off top) of a pedestal of calcareous stone. Inscription in one line. Characters $1\frac{1}{4}$ to $1\frac{3}{4}$ inch high; very plainly cut, but the first one not easy to identify. I cannot believe that the inscription (from Golgoi) reads from left to right, nor that Deecke is right in calling the first character (his last) "vo." It seems to me to read

re. za. ti.

ῥέζαθι

'Do sacrifice.'

71. (Hall, No. 31.) On the lintel (pediment) of a tomb, not of marble, as I once thought (*Trans. Amer. Or. Soc.*, vol. x., p. 215), but of the calcareous stone of the island. Inscription in one line, 3 feet $11\frac{1}{4}$ inches long. Characters $\frac{1}{4}$ to 1 inch high; mostly plain, but some near the beginning obscured. One is broken away entirely, but it can be supplied with certainty. What I formerly read as *u.*, and strongly insisted on, I now find, as the inscription comes out clearer by the effect of air and time, to be *mi.*, as suggested by others. Also, just before the break in the stone, the "ne." of Deecke is plain; though perhaps I should not have seen it had he not indicated it.

e. ko. | e. mi. | a. ri. si. to. ke. re. te. se. | ka. me. ne. se. ta. ne. [| ka.] si. ke. ne. to. i. | me. ma. na. me. no. i. | e. u. we. re. ke. si. a. se. | ta. sa. pa. i. | e. u. po. te. | e. we. re. xa. |

Ἐγὼ ἡμὶ Ἀριστοκρέτης· καὶ μεν ἔστασαν [κα]σίγνητοι μεμνημένοι εὐεργεσίας τὰς παῖ εὐ ποτε ἔφρεξα.

'I am Aristokretes, and my brothers set me up, remembering the good deeds which I once well rendered.'

The first personal pronoun *μεν*, in the accusative, is here to be especially noted.

72. (Hall, No. 1.) This is another inscription which has become perfectly legible in the lapse of time; with, also, the help of Deecke's deciphering of some of the engraver's faulty representations. Deecke is, however, wrong on several points, as the following will show. Inscription in two lines, on a piece of calcareous stone, with sculptured relief above it. One broken place is supplied in brackets. Characters $\frac{1}{4}$ to $\frac{3}{4}$ inch high.

1. *to. o. na. si. ri. to. te. | to. na. [o. ne.] o. ne. te. ke. o. na. si. ti. mo. se. to. i.*

2. *te. o. i. | to. i. a. po. lo. ni. | ia. ra. | i. te. me. no. se. | i. tu. ka. i. |||*

Τῷ Ὀνασίρι το(ν)δε το(ν) να[ον] ὀνέθηκε Ὀνασίτιμος τῷ | θεῷ τῷ Ἀπό(λ)λωνι ἰαρά ἰ(ν) τέμενος ἰ(ν) τύχαι |||.

'To Onasiris Onasitimos offered this shrine; to the god Apollo he consecrated to the precinct in good fortune 3 [offerings].'

Here again occurs the dative *o. na. si. ri.*, as an epithet of Apollo.

73. (Hall, No. 29.) On a sculptured fragment of calcareous stone, like the edge of a window. Characters deeply cut, $\frac{1}{2}$ to 1 inch high. All plain. Inscription in 3 lines.

1. *to. ti. o. se. to. wo. i.*

2. *no. a. i. sa.*

3. *e. ti. | 𐀓 |||*

Τῷ Διὸς τῷ φοί- | να αἶσα | ἔτι . . . 3.

'Zeus's portion of the wine, yet 3 measures.'

The kind of measure denoted by the character before the numeral, and combined with the latter's first stroke, is still unknown.

74. (Hall, No. 9.) On a piece of calcareous stone, with figures in relief. Inscription in 3 lines. Characters $\frac{1}{2}$ to $\frac{3}{4}$ inch high, all plain.

1. *ti. ia. i. te. mi. | to. i. te. o.*

2. *to. a. po. lo. ni. | o. ne. te. ke.*

3. *u. tu. ka. i.*

Assuming that the *u.* in line 3 was intended for *mi.*, the last stroke being omitted by the engraver, the rendering is:

Διαιθεμι[ς] τῷ θεῷ | τῷ Ἀπό(λ)λωνι ὀνέθηκε | μ' ἰ(ν) τύχαι.

'Diyaitthemis offered me to the god Apollo in [good] fortune.'

Here the final *s* (as often a final or non-final *n*) is omitted in the proper name in line 1. Deecke takes the *u.* in line 3 as *ι*, i. e., *σύν*.

75. (Hall, No. 23.) On a fragment of calcareous stone, with a head and other portions of a human body in relief. Inscription in 3 lines, incomplete at the ends. Characters $\frac{3}{4}$ to $\frac{5}{8}$ inch high, all plain except at the broken end. Deecke's Roman type are not called for; nor is his dotted division line in line 2, which is not on the stone.

1. *o. na. si. o. ro. | a. te (or, mi.)*

2. *o. ne. te. ke. to. i. ti. . . .*

3. *to. a. po. lo. ni. | i. . . .*

Ὀνασίωρο[ς] Ἀθη (or, Ἀμι) . . . | ὀνέθηκε τῷ θι[αί] | τῷ Ἀπό(λ)λωνι ἰ(ν) [τύχαι].

'Onasiorus [son of ?] Athe . . . (or, Ami . . .) offered to the god Apollo in [good fortune].'

Deecke's conjecture that the last character in line 1 may be *ni*. is in all probability wrong.

76. On the fragment of a base of calcareous stone, on which still remain the great toe and the next toe to it (with a sandal-strap between), of the left foot of a statue of about life size. The previous descriptions of this fragment are all wrong.

Inscription in two lines, imperfect at the ends. Characters $\frac{5}{8}$ to $1\frac{1}{2}$ inch high, deeply cut; all plain, except some near the broken end; but all are certain. Deecke's remark that *te.* occurs twice without the lower stroke is wrong. It occurs thus only once: namely, in the second line.

1. *e. te. i. ||| a. ne. te. ke. . . .*

2. *ta. we. i. ko. na. ta. te. ne. a. po. . . .*

The observing of the last character present in line 2, makes the reading differ somewhat from those previously given.

"Ἐτει ||| ἀνέθηκε . . . | τὰ(ν) φεικόνα τὰ(ν)δε 'ν' Ἀπό[(λ)-
λωνι (or -να)] . . .

'In the year 3 . . . offered this image to Apollo . . .'

The *ne.* in line 2 I feel obliged to consider as final *ν* of *ιν*, with the *i* elided. The construction is paralleled in the Bronze Tablet; but it is not certain whether the case following should be the dative or accusative.

77. The vase with this inscription was in England in 1872, but it has not appeared since, and it never reached the New York Museum. I have to depend on two sources for this reading: one a manuscript book of Gen. di Cesnola's, made in Cyprus, where it occurs with the note "Vaso di alabastro e sopra un piedestallo in pietra trovato nel Tempio a Golgos." The other is in a like manuscript book, with photographs (taken by Gen. di Cesnola personally in Cyprus), likewise made by him, and in the possession of Mr. Hiram Hitchcock. This last is probably the original from which the copy in Cesnola's Cyprus was taken. In this latter book the object is figured, and appears to be a cylindrical box, $1\frac{1}{2}$ inch high, and $1\frac{3}{4}$ inch in diameter, with plain mouldings at the top. Inscription around the box, at about the middle of its height. Characters apparently $\frac{3}{8}$ inch high.

ka. ma. la? ko. se. zo. te. a. ne. te. ke. a. po. lo. ni.

Perhaps the first character, *ka.*, is an error in the copy for *ti*. Deecke's supplying an additional *a.* in his reading, and his leaving us to suppose that the copy is incomplete, are mistakes. Whether the copy is all right or not, the whole inscription (a complete one) is represented in the copy.

Τίμαλκος (or, Γάμαλκος) Ζωτή[ς] ἀνέθηκε Ἀπό(λ)λωνι.

'Timalcos Zotes (?) offered [this] to Apollo.'

78. (Hall, No. 5.) Also 99, 115; for Deecke gives this inscription three times, as if it were three different inscriptions. Schmidt (*Sammlung*, xii. 5; xvii. 4) likewise gives this inscription twice, as two different ones, in his plates, but only once in his text. In

the second (above-cited) place he puts it upside down, as Deecke also does in his No. 99. In his No. 115 he was misled by a faulty copy.

Inscription on fragment of calcareous stone, in one fragmentary line. Characters 1 inch high, all but one of them partly broken away, but all of them certain.

... *po. lo. ni. | te. o. . . .*
 ... 'A] *πó(λ)λωνι θεῶ . . .*
 '... to the god Apollo ...'

79. The gem here noted is figured in Cesnola's "Cyprus," p. 527 (Plate XXVI.), as if from Curium, and found among the temple treasure, though no record of it otherwise is made in the book. From this representation it is copied in Perrot and Chipiez's *Histoire de l'Art dans l'Antiquité*, as if from Curium. The origin of Deecke's account is Pierides's article in *Trans. Soc. Bibl. Archaeol.*, vol. v., p. 92, no. 7 (in Schmidt it is xxi. 9, not xxi. 8, as Deecke cites it), and probably Pierides is correct. If so, the copy in Cesnola's "Cyprus" was made from a drawing in Cesnola's possession, and is put where it is by oversight. Further, if Pierides is correct, the stone was never owned by di Cesnola, but was found near Golgoi, and came into the hands of Mr. Stini Cristofidi, of Larnaca, who sold it to Mr. Hoffman, of Paris. I have not yet been able to discover the facts accurately; and this statement must stand till further correspondence and light. Inscription on a red jasper seal in gold setting; intaglio, with figure of a mare suckling a colt. Reads from right to left, but the impression would read from left to right. Characters $\frac{1}{2}$ inch high.

ku. pa. ra. ko. ra. o.
Κυπραγόρας.
 'Of Kupragoras.'
 Owner's name.

80. On a fragment of a pedestal (probably) of calcareous stone. Inscription in one line. Characters $\frac{3}{8}$ to $1\frac{1}{4}$ inch high; all plain but the first, which is somewhat damaged, and might be mistaken for an *a*. Deecke's note following his reading of the inscription is all wrong.

me. no. to. ro. so.
Μηνόδορος.
 'Menodorus.'

81. (Hall, No. 25.) On a terra-cotta disk, with grooved edge, colored red. Inscription in two lines; characters $\frac{3}{8}$ to $\frac{1}{2}$ inch high.

1. *pa. ta. si. o.*
 2. :|||:
Φα(ν)τασίω | 4.
 'Of Phantasios, 4.'

Probably a counter or check.

82. (Hall, No. 26.) On a votive tablet of calcareous stone, with

many figures in relief. Inscription covered only a small space, but it is now all obliterated except two characters, each $\frac{1}{2}$ inch high.

... o. pa. ...

Too fragmentary to render.

83. (Hall, No. 27.) On a fragment of calcareous stone, with figures in relief. Inscription formerly contained at least two lines, of which the upper one is broken away, so as to leave only illegible portions. Characters $\frac{3}{8}$ to $\frac{1}{2}$ inch high; plain.

a. ti. pa. mo. o. ta. o. pa. ...

'A(v)τιφάμω(v) ὁ Δαόφα ...

'Antiphamon the son of Daopha ...'

Deecke is wrong in considering the *so*. "sicher," or the *pa*. at the end "unsicher."

84. On a block of calcareous stone, probably the fragment of a pedestal (no "relief fragment," apparently, as Deecke styles it). Two fragmentary lines. Characters 1 to $1\frac{1}{2}$ inch high, somewhat obscured, but quite legible.

1. ... to. o. na. si. ri. — ? ...

2. ... a. ...

τῶ Ὀνασίρι ... | ... α ...

'... to Onasiris ...'

The character which Deecke denotes by an interrogation point is so far gone (beginning just at the break of the stone) as to be wholly irrecoverable. It may have been *ka*., *ti*., *to*., or one of several others. Only a hint at a stroke at the top is perceptible.

85. (Hall, No. 12.) On a square block of calcareous stone, probably the pedestal of a small statuette, around the hollow for which is the inscription, on three sides. The fourth side never contained any part of the inscription; and the inscription is, to all appearance, complete, though Deecke thinks it possibly otherwise. Characters $\frac{1}{2}$ to 1 inch high. I feel doubt only about the reading of the first character.

si. ia. mu. ko. i. | a. o. ma. mo. | pa. to. re.

Σία μυχθα ὁ μαμποπάρω.

'His grandmother's heir [offers, or thanks] to the secret goddess.'

86. On a thin piece of calcareous stone, formerly not found by me, but now both found and familiar. Inscription in 6 (not 5, as Deecke gives it) lines, of which only lower portions of the first—with a few of its characters complete—remain. Characters of fine strokes; $\frac{1}{4}$ to $\frac{3}{8}$ inch high. All the lines incomplete at the end.

1. ke. va. zo. wo? ne? * * ta? mo. * ta? mo. ...

2. ta. po. ro. we. re. mo. se. ta. mo. se. ta. mo. ...

3. tu. ra. ko. ne. o. to. ia. sa. ta. mo. se. ta. mo. ...

4. wa. la. ka. ni. o. e. ko. — o. na. mo. ...

5. a. po. ro. ti. si. o. se. e. ko. ||| ||| o. na. mo. ...

6. a(or i?). ta. no. e. ko. ||| ||| o. na. mo. * po. ta. sa. ...

Evidently a list of allotments and contributions; but not enough remains to permit a certain interpretation. The following is only provisional:

1. *Ἰῆ φαζόρων (?) δᾱμος δᾱμος . . .*
2. *Τᾱφρων φέρμ' ὥς δᾱμος δᾱμος . . .*
3. *Θυραφρων ὁδοὶ ᾱς δᾱμος δᾱμος . . .*
4. *Φαλκάνιο[ς] ἐγὼ — ὠνά μω . . .*
5. *Ἀφροδίσιος ἐγὼ ||| ||| ὠνά μω . . .*
6. *Ἀθάνο[ς] ἐγὼ ||| ||| ὠνά μω [κα] βῶτας . . .*

'Land for religious uses (?) (or, of the lifeless (?)) [which] the district, district . . .

The foundation of the trenches, which the district, district . . .

The ways of the doors, which the district, district . . .

I Valcanios 10 my purchase . . .

I Aphrodisios 6 my purchase . . .

I Athanus 6 my purchase [and ?] herdsmen . . .

But many other renderings are possible in various portions; the *o.na.mo.* may be ὦν ἄμω(ν).

Several of Deecke's suppositions are wrong; but a comparison will show them sufficiently.

87. (Hall, No. 11.) This inscription, after much study, I consider quite desperate; it is so worn where the characters are not plain. It is known to be on a fragment of calcareous stone, with a relief of a crested serpent and a dolphin, but it is not generally known that the fragment is a piece of a huge vase, or purifying vessel. Characters $\frac{1}{4}$ to $\frac{3}{4}$ inch high. Inscription in 5 lines.

1. *ku.ne.mo.o.se.ia.to.te.*
2. *e.*e? a? ne (or a?) .se.ti.*
3. ** * * * * a? * ne? to.i.*
4. *se.ti.ni? | ne.ro.* * * te.pa.*
5. *te? se? * se.ke.to (or ta?) .to.*

The vase was doubtless an offering to Apollo; but I dare not venture farther in interpretation than the first line, which seems to mean *Κύνεμο[ς]* (or *Ἰννή μω*; or *Κυνέμω[ν]*) *οσεία τόδε* (or *τό(ν)δε*). That is either 'Cunemos' or 'Cunemon' or 'My wife consecrated this.'

88. This inscription, and the alabaster vase on which it occurs, reached England in 1872, but have been traced no farther. A copy of the inscription is to be seen (and the authority therefor) in Schmidt's *Sammlung*, xvii. 5. The authority for the copy here given is the manuscript book by di Cesnola, made in Cyprus in 1870, and now owned by Mr. Hiram Hitchcock. The vase is figured in that book, with part of the inscription on it. The vase has a very broad rim, flaring downwards, two small solid ears, and a single line of round moulding about the middle. Just above and below this line, respectively, are the two lines of the inscription, which run quite around the vase. Each line apparently about 5 inches long. Characters apparently $\frac{1}{4}$ inch high. It is not certain where the lines begin, but I give them as in di Cesnola's copy:

1. *te.li.me.lo.we.to.ko.a.le.wo.te.se.ko.o.ta.to.pe.wa.sa.*
|| *to.po.ra.*
2. *xe.lo.ro.se.lo.li.to.pe.pa.ma.ka.te.ti.po.si.ro.ko.to.o.*
pe.wa.ni (or *e.?*). *a.ke.*

I also give (Birch's) copy from Schmidt (*l.c.*):

1. *to.li.me.lo.we.to.ko.a.le.wo.te.se.ko.o.ta.te.pe.wa.se.*
|| *to.po.ro.*
2. *xe.lo.ro.se.lo.li.to.pe.pa.za.ku.te.ti.po.si.ra.ko.to.o.*
wa.ni.e.ko.

It should be added that di Cesnola's figure of the alabastron shows also a possibility that the first (and even the second) *ko.* in line 1 may be either *ii.*, or *xa.*, or *za.*; and that perhaps the *me.* should be read as *e.* There is also a doubt whether the *pe.* should not be read *ne.*, in each case; and possibly, also, whether the *lo.* should not be read as *pa.*

But, as Deecke suggests, a comparison with the original is greatly to be desired.

89. (Hall, No. 21.) On a fragment of calcareous stone, with relief of figures in procession. Inscription in two fragmentary lines, $2\frac{3}{4}$ and $3\frac{1}{4}$ inches long, respectively. Characters $\frac{3}{8}$ inch high; those at the two ends of the upper line, with those in the middle and at the left end of the lower line, somewhat obscure.

1. . . . *te.na.pa.sa.re.se.i.ka.a.* . . .
2. . . . *o.to.ro* (or *i.*). *to* (or *ta.*). *po.te.we.o.i.* . . .

Too fragmentary to render satisfactorily. Deecke's interrogation-point in line 1 is a mistake. No character was ever there.

90, 112. (Hall, No. 8.) This inscription Deecke gives twice (under the above numbers), as if two different inscriptions. It was formerly a great puzzle, but I have been able to make it all out except where the stone is actually broken away. Inscription in one line around three sides of a marble (not alabaster) pedestal; portions on the sides $1\frac{3}{4}$, $2\frac{1}{2}$, and $1\frac{1}{2}$ inches long, respectively. Characters $\frac{3}{16}$ inch high, in all stages of legibility. The division marks here added show the ends of the first two sides.

*a.na.sa.se.a. * * * * to. | te.pa.to.a.ia.ro.se.ma.te.ka.*
ne.to. | a.po.lo.ni. ||| |||
Ἀνάσσης Ἀ. . . . τὸδε πᾶ(ν)τῶ(ν) ἃ ἱάραν'σῆμα θήκαν
τῷ Ἀπό(λ)λωνι ||| |||

'Of the lady A——— this token of all things which they consecrated, they laid up to Apollo, 6 [in number].'

91. On a fragment of calcareous stone, with figures in relief. Inscription in two lines, fragmentary at each end. Characters $\frac{1}{4}$ to $\frac{3}{8}$ inch high, much worn, but legible.

1. . . . *pa.ro.te.ta.wo.to.* . . .
2. . . . *a.o. || na.mi.* . . .

The numeral in the second line appears to me unmistakable; not *zo.* or *no.*, as Deecke suggests.

Too fragmentary to render satisfactorily.

92. On a small fragment of calcareous stone; probably a piece of an incense-box. Inscription in two fragmentary lines, $1\frac{1}{4}$ and $1\frac{3}{4}$ inch long, respectively. Characters $\frac{1}{2}$ to $\frac{3}{8}$ inch high, mostly damaged, but quite legible.

1. . . . o.ta.te.o. . . .

2. . . . pu.ta.a.pi (or o.). . . .

Too fragmentary to render satisfactorily. *

93. On a fragment of a pedestal of calcareous stone. Inscription in two fragmentary lines, the longer 9 inches in length, the shorter with only one character. Characters $\frac{1}{2}$ to $\frac{3}{4}$ inch high.

1. . . . sa.ta.si.ta.mo.se.e.mi.se.i.se. . . .

2. . . . ka.

. . . Στασιδαμός ἡμι . . . (the rest is too fragmentary to render.)

' . . . Stasidamos am I . . . '

Deecke's representation of Schmidt's error is correct. But the first line is incomplete at each end, and Deecke's second proper name is wrong for another reason than that which he mentions. Two more characters than he gives are legible in the first line.

94. I find nothing in the collection that corresponds to this, nor have I ever seen anything like it. It is probably some inscription which I have looked at otherwise, or else one that is lost.

95. (Hall, No. 22.) On a disk of calcareous stone, most likely the foot of a vase. Inscription in a circle. Characters $\frac{1}{2}$ to $2\frac{1}{4}$ inches high, plainly but carelessly cut; two of them partially broken away, and the others not easy to identify.

e.a? a.ia.sa.we.lo. Perhaps: εἰ ἂ ἄϊά σα φελά(ν).

'Having taken what provisions are thine, have done.'

96. (Hall, No. 18.) On the broken-off handle of a præfericulum, of calcareous stone. Inscription in one line, $3\frac{1}{4}$ inches long. Characters $\frac{1}{2}$ inch high, much worn and almost illegible, but the reading, formerly so puzzling, is now certain; the difference being made by exposure to the air.

e.ro.se. | te.ke.to.a.po.lo.ni.

"Ερως ἔθηκε τῷ Ἀπό(λ)λωνι.

'Eros (or Heros) offered [it] to Apollo.'

97. (Hall, No. 20.) On a small helmeted head of calcareous stone. Inscription in one line, around the helmet (or cap), 4 inches long. Characters $\frac{1}{2}$ to $1\frac{1}{2}$ inches high. In my former publication I inadvertently omitted the division-mark. The lines in that representation show the folds or joinings of the cap or helmet.

a.ra.a. | na.o.

'Ἀρὰ ἃ Νάω.

'The vow of Naos.' Or, disregarding the division-mark (which Deecke puts in the wrong place), 'Ἀρὰ Ἀνάω, "The vow of Anaos."

98. (Hall, No. 10.) On a small pedestal of calcareous stone, with sculptured relief on two sides. Inscription in one line, $4\frac{1}{2}$ inches long. Characters $\frac{1}{2}$ inch high.

lo.ti.pa.ia.po.i.i.na.te.to.

Λῶ(ν)τι βαίᾱ ποῖν ἄδετο.

'To a willing one it is pleasant to do small favors.'

99. This is the same as No. 78.

100. To the authorities cited by Deecke for this, add: Cesnola's "Cyprus," plate 3, No. 12.

On the rounded side of a pedestal of calcareous stone. Inscription in one fragmentary line, 10 inches long, fragmentary at the end. Characters $\frac{3}{4}$ to $1\frac{1}{2}$ inches high; all plain except the fifth, seventh, and eighth, which are somewhat obscured.

ti.a.te.mi.se.wa.ta.ki. . . .

Διάσεμις . . . (the rest is uncertain).

Deecke's remark about "einige zufällige Ritze" is all a mistake.

101. On a block of calcareous stone. Inscription above two rude representations of altars; in two fragmentary lines, much defaced. Lines (as they now are) $9\frac{1}{2}$ and $2\frac{1}{2}$ inches long, respectively. Characters $\frac{1}{2}$ to $\frac{3}{4}$ inch high.

1. . . . *te? o? i? e.u.ta.mo.to.te.se. * * te.ke? i.tu.ka.*
i. . . .

2. . . . *ma. * * * e.mi.te.sa.i. . . .*

. . . *Ξεῶι(?) Εὐδαμωδότης [ἀνέ]θηκε i(ν) τύχαι . . . | . . .*
μα . . . ἡμι δῆσαι(?) . . .

' . . . to the god Eudamodotes offered . . . in good fortune . . . ' (the rest is uncertain).

102. This object went to England and was copied there, but seems never to have reached America. It is here copied from Gen. di Cesnola's manuscript note-book. Inscription in one line, on a cylindrical alabastron (or alabaster vase), which has a downward-flaring rim and small solid ears. Vase $11\frac{3}{4}$ inches high. Inscription in one vertical line, below one of the ears; apparently $2\frac{1}{2}$ inches long. Characters apparently $\frac{3}{8}$ inch high.

ti.pa.se.i.ti (or wo.).to.te.

A copy in Schmidt's *Sammlung* (Taf. xix. 4), there attributed to Dr. Birch, omits the second *ti.*, and reads

ti.pa.se? a.to.te.,

which Deecke follows. The character here given as *se?* is a little doubtful, since in one of di Cesnola's manuscript copies it looks much like a mutilated *i*. Yet in his other copy it is a plain *se*. In the circumstances, the reading is a little uncertain. But it seems to be

Διφασεῖδι τόδε (or, *τό(ν)δε*). 'This [is an offering] to the serpent-formed;' or else it may be considered a present to a human person whose proper name is *Διφασεῖδης*, or the like.

103. (Hall, No. 7.) On the lobe of a votive ear of calcareous

stone (not terra-cotta, as I formerly thought), colored red. This ear (as well as the next number) is a right ear. It is much smaller, also, than the next. Inscription $\frac{3}{4}$ inch long. Characters $\frac{1}{8}$ to $\frac{5}{8}$ inches high; the strokes pretty plain, but the shapes of some of the characters a little obscure.

ko (or po.) . i . to . ta . ko (or po.) .

Meaning uncertain.

104. (Hall, No. 6.) On the lobe of a votive ear (right ear) much larger than the preceding, of calcareous stone, colored red. Inscription $\frac{3}{4}$ inch long. Characters $\frac{1}{8}$ to $\frac{5}{8}$ inch high, quite plain.

to . po . to . e .

Meaning uncertain.

105. On a fragment of calcareous stone, with bas-relief, with horses' legs remaining. Inscription in two fragmentary lines, showing the ends only. Characters $\frac{1}{2}$ to $\frac{3}{4}$ inch high; plain.

1. . . . *wa .*

2. . . . *lo . te . ta .*

Too fragmentary to render satisfactorily.

106, 116. (Hall, No. 28.) This inscription also Deecke has given twice, as if two inscriptions. On a fragment of calcareous stone, with relief of woman and child. Inscription an end-fragment, $1\frac{1}{2}$ inches long. Characters $\frac{1}{2}$ inch high; the last one plain, the others broken, but pretty certain.

. . . a ? te . na .

Too fragmentary to render.

107. On a sculptured fragment of calcareous stone, with portion (the bow?) of a boat, and two sailors. Inscription in two fragmentary lines. Characters $\frac{1}{2}$ inch high.

1. . . . *ti . to . me .*

2. . . . *ke .*

Too fragmentary to render. Deecke's reading is wrong in every character.

108. On a piece of calcareous stone, from the base of a statue. Inscription in one line, 8 inches long, apparently complete. Characters $2\frac{1}{2}$ to $2\frac{3}{4}$ inches high, all plain.

to . no . ke .

Purport uncertain.

109. (Hall, No. 15.) On a fragment of a heavy vase of calcareous stone. Inscription in one fragmentary line, 6 inches long. Characters 1 inch high.

. . . to . u . zo . mo . ko (or po.) . . .

Too fragmentary to render satisfactorily. Deecke's remark about my having published this upside down was taken from my own discovery and note of the fact. Every one else had taken it in the same way.

110, 111. These I have not found; but I suspect they are other copies of inscriptions which appear elsewhere herein.

112. This is the same as No. 90, which see.

113. This, like others already mentioned, seems never to have come from England to America. I copy from Gen. di Cesnola's MS. book, above-mentioned. Inscription on fragment of little vase of calcareous stone, from Golgoi (not of uncertain locality, as Deecke thinks). Two lines. Measurement not known.

1. *ti. te. ro* (or *ra.*) . *ro. se. o.* —?—?

2. *se? le. pa.* —?—?—?

Uncertain whether the lines are fragmentary; and too fragmentary to render.

114. See above, among inscriptions from Palæo-Paphos.

115. Same as No. 78, which see.

116. Same as No. 106, which see.

117–119. These are inscriptions on lamps, already sufficiently published by me as to their form. As to the reading, I purpose to give them, with others of a similar sort, at some future time. By themselves alone, these three would present only a fragmentary view; and they need all the others for their elucidation.

PYLA.

121. On the convex side of a fragment of a great vessel of calcareous stone. Inscription in two lines, 11 and 2 inches long, respectively; the end of the first and the beginning of the second being broken away. Perhaps the two lines are parts of an original single line that surrounded the vessel, with the ends lapping, like a spiral. Characters $\frac{1}{2}$ to $1\frac{1}{2}$ inch high; all plain, except that two at each broken end are damaged.

1. *ti. mo. to. re. te. se. to. ma. ki. ri. o. se. o. ne.* . . .

2. . . . *se. se.* | ||| |

Deecke's reading and transliteration have several mistakes. His note on the appearance of the characters and their possible meanings, with its other matter, is all wrong.

Τιμοδώρητης τῷ Μαγίριῳ ὄνε[θηκε . . . | . . . σης ||| |

'Timodoretes to Magirios (or, the son of Magirieus?) offered . . . 4.'

Other inscriptions, Greek and Cypriote, seem to show that the insertion of the second *se.* in line 1 is a mistake of the engraver. Magirios, Mageiros, or Mageirios (i. e. cook) was an epithet of Apollo.

KARPASS (OR KARPASSO).

142. (Hall, No. 17.) On the edge of a lamp of red terra-cotta, with figure of Silenus (?) or Bes (?). Inscription 2 inches long. Characters $\frac{1}{4}$ to $\frac{3}{8}$ inch high; all very plain; made while the clay was soft.

pi. lo. ti. mo.

Φιλοτίμω.

'Of Philotimos.'

Owner's name.

The above list, I believe, finishes the New York inscriptions treated by Deecke. The following are inscriptions in the di Cesnola Collection in New York which I believe are hitherto unpublished. The numbers here given are only provisional.

GOLGOI.

1. On the top of a seat, or foot-stool, of calcareous stone, which is figured in a cut on p. 159 of Cesnola's "Cyprus." On the side of the stool is a Chimæra, between two large rosettes. Looking at the cut just referred to, the inscription, if represented, would be on the top, and upside down to the spectator. Inscription in eleven lines, cut with the characters inclosed in irregular or imperfect squares, formed by the crossing of horizontal and perpendicular incised lines. Characters $\frac{1}{4}$ to $\frac{3}{4}$ inch high, in all stages of preservation and defacement. Space occupied by the inscription, 7×9 inches.

The first three rows from the top have each seven squares or characters; the rest, six each. There are a number of empty squares on the left. A crack across the stone (the stool is hollow, as if formed of three slabs, though it is in one piece) has damaged some of the characters. As here given, the inscription is supposed, like the rest of the Golgoi inscriptions, to read from right to left.

1.	ki.	lo (or ke?).	za.	ma.	po.	si?	si.
2.	pi.	le.	wo.	ka.	la (or mi?).	i.	—?
3.	te.	e (or tu?).	ti.	ku.	ne.	—?	—?
4.	*	o.	mi.	pa.	se.	*	
5.	i?	a?	ki (or la?).	a.	le.	so.	
6.	*	re.	pe.	ko?	mi.	wo.	
7.	—?	ka?	i.	ta.	wa.	—?	
8.	ii.	*	ma.	pa (or lo?).	ni.	mo.	
9.	ia?	*	—?	te?	i.	ma (or ku?).	
10.	si (or ka?).	mo.	ka.	ma.	ia?	mo.	
11.	po.	re.	a.	ku (or ma?).	*	mo.	

Stars (as elsewhere) are used to mark places where the character is wholly obliterated; a dash, with interrogation point (—?), to denote that there are undistinguishable remains of a character. The simple interrogation point expresses doubt, merely.

Too uncertain and fragmentary to render.

2. On the right shoulder of a statue of calcareous stone, with cup in one hand and a dove in the other, figured in Cesnola's "Cyprus," on page 132. Inscription in one curved line, $2\frac{3}{4}$ inches long; the beginning perhaps wanting. Characters $\frac{1}{2}$ inch high, all of them nearly obliterated, except two, of which one is partially defaced.

ta. se. pa. pi. a. se.

Tās Παφίας.

'Of Paphia.'

3. On the arm of a statue of calcareous stone, figured (helio-typed) in vol. i., plate III., No. 5, of the "Descriptive Atlas of Cypriote Antiquities in the Cesnola Collection." Inscription in one line, $4\frac{1}{2}$ inches long. Characters $\frac{3}{8}$ to $\frac{1}{2}$ inch high; somewhat obscured, but perfectly legible.

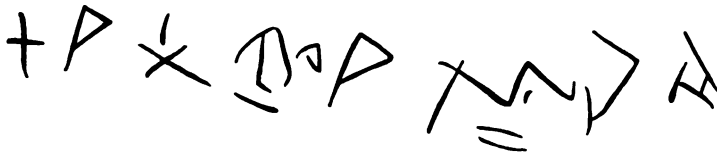
e.ko.ta.mi.ko.ra.u.e.mi.

'Εγὼ Ταμιγόραν ἤμι.

'I am of Tamigoras.' Probably the engraver made a mistake in the spelling, and the name should read *Τιμαγόραν*, or 'of Timagoras.'

Probably a votive inscription; else, but not so likely, either the artist's name, or the name of the original of the statue.

4. On a block of calcareous stone; perhaps part of a pedestal. Inscription in one line, $5\frac{1}{2}$ inches long; uncertain whether complete or not. Characters $\frac{1}{2}$ to $\frac{3}{4}$ inch high, not easily identified. No reading thus far obtained is satisfactory. It is thought better to subjoin a cut than to attempt Roman syllables.



5. On the edge of the fragment of a disk of calcareous stone, on whose front was carved a human face. One character, $1\frac{1}{4}$ inch long.

a.

Purport uncertain.

6. On the curved border of an ornamented block of calcareous stone, apparently a fragment of a sarcophagus. Inscription 3 inches long, fragmentary at both ends. Characters $\frac{1}{2}$ inch high.

... e.si.si.pe.le. ...

Too fragmentary to render satisfactorily.

I have some reason for supposing that this inscription has been supposed to come from Amathus, and that it is really the one represented by Deecke as No. 55.

CURIUM.

7. On the base of a crouching statuette of calcareous stone, from the temple of Apollo Hylates, near Curium. Inscription in one line, all round the base of the object; obliterated in two places; 9 inches in entire length. Characters $\frac{1}{8}$ to $\frac{1}{4}$ inch high; generally quite legible. Reads from left to right.

* * * * * *to.te.a.po.lo.ni.te.o.* * * * o (or mo., or pi.). i.a (or possibly ku., or ma.).te.si.pa.te.lo.we (or pa.).ia (or ra.).li.pi (or possibly o.).se.o.pa.te.**

... τὸ(ν)δε Ἀπό(λ)λωνι Σεᾶ[ι . . .] (the remaining characters thus far offer no satisfactory reading).

(At this point see Deecke's No. 50, above.)

8. On the base of a crouching statuette, of calcareous stone, from the same place as the last. Inscription all gone but one character, $\frac{1}{8}$ inch high.

... *ti* (or, perhaps, a mutilated *ka*).

Doubtless fragment of a votive inscription to Apollo.

9. On the neck of a pitcher of red terra-cotta. Inscription incised after baking; $1\frac{1}{2}$ inch long; all plain, except that one character is a little obscured, but yet quite legible. Characters about $\frac{1}{4}$ inch high. Reads from left to right.

ia.le.pe.mo.

Ἰαλεφήμων.

‘Of Ialephemos.’

Owner’s name.

10. On a cylinder of hematite, $\frac{1}{8}$ inch high and $\frac{7}{16}$ inch diameter, with a hole through it lengthwise, in the usual fashion of cylinder seals. Inscription in 6 characters, $\frac{3}{16}$ to $\frac{1}{8}$ inch high, around a part of the cylinder, near the upper end. A cut is given of the inscription, which shows the uncertainty that attaches to the reading of the first two characters. The first one is immediately below the second, following the space available, as sometimes appears in other inscriptions. The figures on the cylinder are the following: Directly below the inscription is a dog, running at full speed, with open mouth and extended tongue; and tail curved up forwards above his back. But he is running down the length of the cylinder, and thus seeming, when the cylinder is held so as to read the inscription, as if hanging head downwards. He is following a human figure, who stands next to the right, facing to the right. This figure, like the other standing figures, is $\frac{1}{4}$ inch high, as high, nearly, as the length of the cylinder allows. He is apparently bearded, his arms are little more than stumps, and his dress is a very short frock, and hardly distinguishable. His head is in profile, and the feet are turned to the right, but the body generally appears in a front view. The next figure, facing the right, is seen wholly in profile; it is a human figure, slender, with apparently an animal’s head (dog’s?), a hint at a very small curled tail, the arms hanging in front of the body, and the hands carrying some undistinguishable object that has the shape of an S, with the top curve interrupted on its side. Next (to the right) is a human figure much like the first, but no beard (apparently), his body seen in front view, but head in profile and turned to the left, and his feet also turned to the left. His arm on the left (that is, left considering the order of objects on the cylinder, but the figure’s right arm) is merely indicated by a stump; but the other arm bends horizontally at the elbow, and the hand holds an antelope, or chamois-horned animal, suspended by the hind legs, with its back towards the human figure that holds it. Next is a fat, flying bird, whose body, tail, and neck stretch lengthwise of the cylinder, as if we were looking at its back. Its (large) head is turned to the right. Its wings are small, its tail large and out-

spread. That completes the round of the cylinder. The inscription is above the dog, bird, and antelope. It seems as if the interpretation of the scene were that the man with the antelope is returning from a hunt, while the others are meeting him; the dog following the latter, and the bird flying away. The inscription is as follows:



that is, either *we.ko.na.e.ro.ti.*, or
ta.xe.na.e.ro.ti.

The difficulty in the first reading is that the upper stroke of the first character is disjoined, and seems to belong to the next character, and improperly to be taken as a part of the first. Also, the position of the character is at right angles to that which we should expect. Also, no rendering appears satisfactory. The easiest one suggested is *ῥεχὼν ἃ Ἐρωτι*, 'Willing in things which belong to Love.'

The difficulty in the other reading is that the character *xē* wants its middle stroke, for which there would hardly be space, and which is sometimes almost vanishing. We do not, in this reading, avoid having two characters at right angles with the rest, but they turn the corner properly, which is not the case with the other reading. I therefore incline to the latter reading; and the best I can do with it is the following, which comes easily from the syllables:

Tà ἕτερα Ἐρωτι, 'Things strange to Love;' or

Tà ἕτερα ἔρρο(ν)τι, 'Things strange to a wanderer.'

This cylinder is quite unique, as no other is known with a Cypriote inscription of more than a detached character or two.

A few other cylinders of hematite, found with the one just described, have one or more Cypriote characters upon them, as follows:

11. Hematite cylinder, 1 inch long, $\frac{3}{8}$ inch diameter. Figures: a standing robed figure, shoulders and arms in front view; head, robe from the waist down, and feet in profile, turned to the right, forearms bent up from the elbows; above the left (or right from the spectator's point of view) hand, the Phœnician ball and crescent. Head of this figure furnished with abundant hair, and a queue turning up behind. In front, or to the right, of this figure, at the top, an antelope, with head down as if to graze; below, a rude lion; and between them, above the lion's back and below the antelope's hind legs, the Phœnician ornamental star or sun, composed of one larger ball, and eleven smaller balls or dots around it. To the right of these figures a running antelope, running lengthwise of the cylinder, downwards, its back towards the lion and first-mentioned antelope, and its head turned to look back. Horns very conspicuous. Between the haunch and the neck is the Cypriote character *pa.*, $\frac{1}{8}$ inch high. Purport uncertain.

12. Hematite cylinder, $1\frac{1}{2}$ inch long, $\frac{3}{8}$ inch diameter. Figures as follows: Robed human figure, with wings stretched up, stumps for arms, face obscure, but apparently faced to the right. At the left of this figure is the head (and horns) of an antelope, as if the animal were lying on the ground, with its body concealed behind the human figure. (At the left of this figure is the inscription.) Next to the right, at top, a buffalo, running; below, an antelope standing, with neck and head stretched up, as if looking at the bull and the next figure to be mentioned. The next figure is a winged quadruped, with head and neck more like a peacock's than anything else. The body seems, on comparison with the figures on other cylinders, to be that of a lion. Above this two ornaments, each like Hogarth's line of beauty with spirals added at the ends. Between this figure and the first mentioned are the Cypriote characters, as follows:

At top, to the left of the figure first mentioned, and to the right of the upper one of the ornaments last mentioned, is the character *ta.*, $\frac{3}{8}$ inch high. But the recurrence of this character as an ornament on objects lately found in Greece, where it cannot be writing, makes me suspect its meaning here. Below, just in front of the beak of the winged quadruped last mentioned, and above the horns of the antelope's head first mentioned, is the character *lo.*, $\frac{1}{4}$ inch high.

At the bottom, between the fore-feet of the winged quadruped and the antelope's head, the character *pa.*, $\frac{1}{8}$ inch high.

13. On the fragment of a silver bowl, with designs and figures in repoussé work, from the temple-treasure of Curium. Two inscriptions, one which may be either Phœnician or ancient Greek, letters indented from the outside, and to be read therefore on both sides, *KPAT* or *KPAT*. In Cypriote, incised or indented on the inside, in characters about $\frac{1}{2}$ inch high,

ko.ta.po.ro.pe.i.,

in which the *ta.* is doubtful; and doubtful also whether the reading is from right to left, as here given, or from left to right, like most of the inscriptions that belong to the locality. I have not had sufficient opportunity to study the fragment to be more certain. It is still in process of cleaning, and has to be handled with great care.

CITIUM.

14. On the convex side of a pitcher, or vase with handle, of red terra-cotta. Inscription, incised after baking, $1\frac{1}{2}$ inch long. Characters $\frac{1}{2}$ to $\frac{5}{8}$ inch high; plain.

ta.le.se. $\Theta\alpha\lambda\tilde{\eta}\varsigma$ or $\Theta\alpha(\lambda)\lambda\tilde{\eta}\varsigma$.

'Of Thale,' or 'Of Thalle.' Less probably, 'Thales.'

Owner's name.

15. On a cylindrical amphora-stopper, of light blue pottery. Characters $\frac{3}{8}$ inch high; one on the end, and one on the side, of the cylinder.

On the end, *ia*.

On the side, *lo*.

Proprietary mark or label, probably.

MARONI (MARIUM?).

16-19. Single characters on the bottoms of tall, slim vases of red terra-cotta. The character, or inscription, not stamped, but marked or impressed while the clay was soft. Characters $\frac{1}{4}$ to $\frac{3}{8}$ inch high, very sharp and distinct, and of the western style.

16. *to*.

17. *sa*., or *ko*., as it can be read either side up.

18. *we*.

19. *ti*.

Initial characters, probably; either the owner's name or the maker's mark.

20-23. Inscriptions on the handles of long-necked flattish bottles, like flat *aryballi*, of red terra-cotta. Characters made while the clay was soft; sharp and plain; $\frac{1}{4}$ to $\frac{3}{4}$ inch high.

20. *ka*.

21. *lo*.

22. = (like the algebraic sign of equality. Is it *we*.? or an unknown character?)

23. *ko*.

Initials, probably; either owner's name or maker's mark.

24. On the handles of a large terra-cotta jar or vase, pear-shaped, with narrow base and the large part above; handles at the top, joining on a false mouth at the center of the top, the real mouth being a little to one side; jar 1 foot 3 inches high, and 1 foot in greatest diameter. Characters made apparently with a file, after the baking. On one handle, two characters, one a plain *pa*., $\frac{3}{4}$ inch high; the other doubtful, but probably *to*., $\frac{1}{2}$ inch high. On the other handle, a doubtful character, $1\frac{1}{2}$ inch high, probably *me*. or *le*. Private marks, or initials, probably.

25. Cut, as with a diamond, in the side of (a fragment of) a glass vessel about the shape and size of a finger-bowl. The glass is now much decayed, and beautifully iridescent. One character, $\frac{1}{4}$ inch high.

to.

Initial letter, probably.

SOLI.

26. On a fragment of a female figure in terra-cotta. One character on the throat, just above the chest; $\frac{1}{4}$ inch high; made while the clay was soft; very sharp and distinct.

ti. Of unknown purport.

LOCALITY UNKNOWN.

27. On the bottom of a red terra-cotta vase with handle. This is now packed away among the objects not on exhibition in the Museum; and it is therefore inaccessible at present, so that its locality cannot be certainly affirmed; but its place can be told from its mark, whenever it is brought out. I have seen and copied it, and take the reading from a squeeze of my own. Inscription in a circle, $1\frac{1}{8}$ inch in outside diameter. Characters $\frac{1}{4}$ to $\frac{1}{2}$ inch high, in rather fine strokes; all plain.

te. le. pa. no. to. ta. ko.

Τηλεφάνω τῷ Τάγῳ (or, *Δακῳ*).

'Of Telephanos the son of Tagos' (or Dakos, or the like).

Owner's or maker's name.

28. On the bottom of a thin rectangular plaque of fine, hard sandstone, from a tomb whose locality is not remembered. The edges of the bottom are beveled. On the top are two long, shallow, polished depressions, as if to hold a couple of objects like cigars. Inscriptions formerly in several lines, running the whole length of the flat bottom; but at present all that remains is the end of one line, $\frac{3}{4}$ inch in length. Characters $\frac{3}{16}$ inch high, of fine strokes, easily legible.

... o. ii. i. ti.

Too fragmentary to render.

29.-31. Legends on silver coins. The three are silver coins of Euclthon, king of Salamis, sixth century B. C., each made with a different die. Device and legend, however, the same on all. Two of the coins are $\frac{5}{16}$ inch in diameter, and the remaining one $\frac{1}{4}$ inch. Characters on all, $\frac{1}{16}$ inch high. The device on the obverse is a ram lying down. Above and below the ram is the king's name, in two lines. The second line is very obscure on all, but traces of it remain.

29. 1. *e. u. we.*

2. [*le. to. to? se?*]

30. 1. [*e.*] *u. we.*

2. [*le. to. to? se?*]

31. 1. *e. u. we.*

2. [*le. to. to? se.*]

For all: *ΕΥΚΕΛΘΟ[ν]τος* or *ΕΥΚΕΛΘΩΝτος*.

The character denoted as "*to?*" above, I have always thought to be *no.*; but I defer to other decipherers.

Besides these coins are a few others whose Cypriote legends are now undecipherable, but which can readily be recognized as of Euclthon and of Evagoras.

The number of lamps in the collection with characters like those formerly published by me is not far from a dozen; but, as said above, I think they require to be treated by themselves.

ARTICLE VII.

ON THE

PROFESSED QUOTATIONS FROM MANU

FOUND IN THE MAHĀBHĀRATA.

By EDWARD W. HOPKINS,
INSTRUCTOR IN COLUMBIA COLLEGE, NEW YORK CITY.

Presented to the Society October 25th, 1883.

BEFORE proceeding to a discussion of the Epic Manu, a few words in regard to Manu's position in the older literature will be useful.

It has been suggested that Manu is not especially a Hindu creation, but may be considered as part of the Indo-European Pantheon. In this connection it will suffice to call attention to the position held by Minos among the Grecian deities, and to the fact that Tacitus relates of the Germans that they have songs which proclaim Tuisto, an autochthonous deity, and his son Mannus, to be the founders of their race.

In the Veda I will refer only to the exhaustive article of Muir in the first volume of his Sanskrit Texts, and to the essay of Roth in the sixth volume of the German Oriental Journal, to show that in their ancient literature the Hindus regarded Manu as the father of their race, that they often looked upon him as upon a Prometheus who first gave them fire, and that the idea they seem to have formed of this personage (whom Roth proves to have been a myth) was that of a semi-divine seer, occasionally regarded as primeval man, occasionally as the originator (after the flood) of a new race, occasionally as a divine and superhuman being.

In the Brāhmaṇas we have stories related of Manu, such as his dividing his inheritance and the like, with some attempt at furnishing him with a family, but without any of the later

thought which presented him as a law-giver—this I think having originated from the circumstance that his reputed acts (such as the division of property) were first quoted as authoritative precedent; and then, with the growth of legal literature, the primeval man, whose acts were thus quoted, grew into a personal authority on legal points, whose words on law (of course invented) attained the influence which citations from such an eminent authority would naturally induce.

The law-Sūtras (keeping 'law' as the most general, and at times most fitting translation for *dharma*) were those earliest attempts at collecting the rules on duty of every sort, which in their prose form were the base of the later metrical *śāstra*. It does not appear to be the case that all *sūtra* literature developed into the metrical form at the same time, nor does it seem probable that the development into the later metrical form in any way suppressed the technical and too concise abbreviations of law and duty which for the sake of convenience were put originally into the short prose rules of the Sūtras. They may have existed side by side.

QUOTATIONS FROM MANU IN THE SŪTRAS.

The following contains all the matter quoted directly from Manu in four of the oldest Sūtras:

1. In Gautama, the oldest *dharmaśāstra* we possess (so far as the matter it contains goes), we find one reference to Manu as a seer of Vedic hymns (RV. viii. 27-21). Of Manu as law-giver there is but one mention, xxi. 7, in which the mere name "Manu" is put at the end of a list of inextinguishable crimes, to indicate that he is regarded as authority for the statement—which, in fact, agrees with the sentiment of the Manu-treatise in xi. 90-92, 104-105, although no direct quotation is intended. It is to be remarked, however, that while the Mānava-treatise, by imposing a penalty resulting in death, implies that there is no expiation, it makes a formal statement to this effect only in the case of one of the three crimes, that of killing a Brahman.

2. In Baudhāyana's law-treatise we have one reference (ii. 3. 2) to Manu taken out of the Brāhmanical literature: "Manu divided his property among his children" (Taitt. Sañh. iii. 1. 9^a); where Manu is not quoted as a law-giver, but as a sage whose act is worthy of imitation. Besides this reference, we find two quotations from Manu as an authority, the first in iv. 1. 13, where it is said Manu declared (that the father incurs) a mortal sin at each appearance of the menses (if he does not give his daughter in marriage at the right time). This might be the construction of Vas. xvii. 71, or of Yāj. i. 64, where it is said that the father incurs thereby the guilt of slaughtering an embryo; but in our Mānava-treatise it is only said that the father is blamable (*vācya*). Gautama also in the parallel passage (xviii. 22) says

merely that the father is faulty (*doṣi*). The second quotation says that Manu declared the *aghamarṣana* penance as effectual in removing sin as a horse-sacrifice—which, in effect, is so stated to be the case in our Mānava-treatise, xi. 260–261, a quotation copied by Vasiṣṭha as from Manu, but by the older Gautama declared without authority for the statement (xxiv. 10).

3. In Āpastamba's work we find also only a reference to Manu dividing his property (ii. 14. 11), in a passage controverting the view advanced by Baudhāyana in regard to dividing an estate; and (in ii. 16. 1) a statement that Manu revealed the ceremony for the dead (*śrāddha*).

4. In Vasiṣṭha, the last of these, on the other hand, we have several references to Manu, some of which agree only in sentiment, some verbally, with our Manu-treatise. Now it appears to me that there is an interesting difference in the way in which his quotations are made. I notice that whenever we have a citation from Manu introduced by the words "Manu said," there can be found no verse in our Mānava-treatise exactly corresponding to it, but only either a complete variation in sense or a merely general agreement with the sense of our Mānava-treatise—except in one instance (iv. 6), where the verse ending "Manu said" is itself incorporated (together with the "Manu said") into our text; on the other hand, whenever Vasiṣṭha gives a quotation which answers exactly to some verse in our present Mānava-treatise, he always introduces it with the words "now they relate on this point a Manavan verse" (*mānavam cā'tra ślokaṁ udāharanti*). Let us examine the citations in detail. To begin with those of the first sort, we find the following: In i. 17, Vasiṣṭha declares that "Manu said" the (peculiar) laws of country, caste, and family may be followed on points where there is no revealed text to decide the case (Gaut. xi. 20; Āp. ii. 15). The words here used (*abruvīm Manuḥ*) are only authorized by the sense of the Mānava-treatise in vii. 203; viii. 41, 46: "Let (the king) make authoritative the laws of those (he has conquered) as declared;" "A king who knows the right should cause his law to be established, after inspecting the laws of the (different) castes and country-folks, and the laws of guilds and families;" "Whatever is practiced by good and virtuous Brahmans let the king ordain (as law, if) not opposed to (the laws of) districts, families, and castes."

In xi. 23 we find, among several verses which Vasiṣṭha quotes from general hearsay, one "Manu said" verse (immediately after a "Yama said" verse), in respect to the disposal of food left over at a *śrāddha*, something like M. iii. 245–6; and on comparing it with our Mānava-treatise, we find it not the same exactly, though resembling it in form: in fact, the point at issue, the disposal of the food, is quite different. We note too that while our treatise ends with "they say," Vasiṣṭha also has *iti sthitiḥ*, though the whole is given from Manu.

In xii. 16, after the rule "by water and hand let him cleanse the vessel" (*udakapāṇibhyām parimṛjyāt kaṇḍalum*), we

have the statement "Manu Prajāpati calls this (way of cleansing) encircling with fire," in which this statement is only part of a quotation, without more authority than is implied by the words "they repeat (these verses)." This might answer to the purification by hand or water enjoined in our treatise v. 116, but there is there no such appellation as "encircling with fire" given to this means of cleansing, such as is here said to be the definition of Manu (*paryagnikaranam hy etan Manur āha Prajāpatiḥ*).

In xxiii. 43, we find the statement that Manu, chief among the supporters of the law, invented the *çikukṛcchra* ('child's penance'), which is then described; but in our Manu-treatise the penance by this name is not the same; for Vasiṣṭha's penance seems compounded of (M. xi. 220) the Mānava-treatise's "child-penance" and "Prajāpati-penance" (M. xi. 212). Sufficient for us is the fact that nothing in our treatise answers to this statement.

In xxvi. 8, we have a verse like Baudh. iv. 2. 15, quoted above, in regard to the *aghamarsaṇa* (M. xi. 260-261), which, being a "Manu said" verse, would seem to contradict the rule. This quotation, however, is in a chapter of which Prof. Bühler says "its genuineness is not above suspicion" (Introd. Vas. p. xvi.); so that it is to be regarded as doubtful.

In iv. 6 is the one apparent exception noted above, but explained by the fact that the verse, just as it stands in Vasiṣṭha, occurs in our Mānava-treatise also as quoted from Manu (v. 41). It is found in a passage which, all taken together, is not an exception, but an example of the practice I have noted as occurring whenever the verses given correspond exactly to our treatise; for this verse is only part of the quotation Vasiṣṭha gives. The quotation begins with the second formula, *mānava*, 'a Manavan passage is now given;' and this, according to the usage I have indicated, ought to contain words found in our text. Accordingly, we find verse 6=M. v. 41, verse 7=M. v. 48, while verses 5 and 8, with which the quotation begins and ends, are in prose, not in metrical form like verses 6 and 7: or, in other words, as Prof. Bühler points out, a veritable remnant of the old Mānava-sūtra in its prose form, before it became metrified. This then is the first example of a true quotation (according to the standard of our text) from the Mānava-treatise, and it is introduced as a whole, not by "Manu said," but by *mānava*.

The next quotation of this sort is in iii. 2 (*mānavam cā 'tra gḷokam udāharanti*), 'they relate this Manavan verse;' and then follows a verse which we have in our Mānava-treatise at ii. 168.

The next (xiii. 16) is introduced in the same way (*mānavam cā 'tra gḷokam udāharanti*), and reads as follows: *phalāny āpas tilān bhakṣān yac cā 'nyac chrāddhikam bhavet: pratigrhyā 'py anadhyāyaḥ pānyāsyā brāhmanāḥ smṛtāḥ*. This is the verse which, with some *var. lec.*, we find in our text at iv. 117, the verse being evidently the same, loosely quoted, with the substitution of a

general for a particular enumeration in the first part. There is here no difference of substance.

The next verse (xix. 37) has the same formula at the beginning (*mānavam* etc.), but is in the *triṣṭubh* metre, a metre in which probably a good many of the Manavan verses were originally written; so that it would be impossible to find the same verse in our treatise, which is composed in another and shorter metre; all that we can expect is a verse like it; and this we find in x. 120, although, in shortening the verse to adapt it to its present metre, part of the original has been omitted.

The next verse (xx. 18) has this formula also, and equals xi. 152 of our text. Now, counting out the suspicious verse xxvi. 8, we find that there are five quotations introduced as *mānava*, and that they all correspond with verses in our Mānava-treatise, the correspondence being in three of them verbatim, and the other two being exact in so far as the sense of one verse in our treatise answers precisely to each one given by Vasiṣṭha; while the difference of form in one of the two is explained by a change of metre, and the difference of form of the other, though considerable, does not alter the sense, the whole answering to one verse in our treatise. On the other hand, we find that there are five quotations introduced by "Manu said," and that none of them corresponds to any one verse of our Mānava-treatise; the lack of correspondence consisting in this: that one of them (xii. 16) has nothing like it in our treatise; that another of them (xxiii. 43) describes a penance mentioned in our treatise, but as something different from the one called by the same name in our treatise; that the third (xi. 23) is like in form to one of the verses in our treatise, but decides the point differently; that the fourth (i. 17) only expresses the combined sentiment of three verses of our treatise, and then adds something not in our text: while the fifth "quotation from Manu" (iv. 6) is properly only a portion of a longer *mānava* quotation in which the same verse occurs as that still preserved in our Mānava-treatise as a "Manu said" verse.

The significance of this difference I shall remark upon at the end of this paper.

QUOTATIONS FROM MANU IN THE INSCRIPTIONS.

In the interesting grant of land under Dhruvasena I., where we find that a Vaiṣṇava king has a niece who founds a Buddhist monastery, we read this inscription: "He who steals land is guilty of the five great sins and the minor sins; and on this point there is a verse by Vyāsa, saying, 'He who steals land etc. incurs the guilt of the killer of one hundred thousand cows.'" Before this we find the following description of King Drona-simha: *manvādipranītavidhividhānadharmā dharmarāja iva*: i. e., 'He followed the rules laid down by Manu and others.' This inscription dates back to the middle of the sixth century A. D., (Gupta) *samvat* 207 (Ind. Antiq. iv. pp. 104, 105). In a Cera grant (Ind. Ant. v. p. 133) of 513 A. D., we find *api cā 'tra*

Manugītaḥ ślokaḥ ('there is a verse sung by Manu'); and this verse says that he who steals land passes 6,000 years in "horrible darkness." A Pallava inscription (ib. p. 154) gives the usual verses as "verses of the seers" (*ārsāḥ ślokaḥ*). In the three Vallabhī grants (ib. p. 205), *śumvat* 207, grantee a student of the Atharva-Veda, we have *atra Vyāsagītaḥ śloko bhavati* ('there is a verse sung by Vyāsa'); and this also gives 6,000 years of hell to him who deprives one of land or consents thereto (*ācchettā, anumantā*), while the giver lives as long in heaven. Vyāsa is also the reputed author in the Gujarat grant, *śak.* 380 (Ind. Ant. v. p. 109). The Pallava grant of the fifth century (ib. p. 50-51) has a more legal look, in that it says the thief deserves corporal punishment (fourth Plate); the rest is like the Cera grant: *yaḥ ce 'dam asmacchāsanaṁ atikrūmet sa pāpaḥ cārīradandam arhati; api cā 'pi ślokaḥ: bhūmīdānāt param dānaṁ na bhūtaṁ na bhaviṣyati, tasyai 'va haranapāpān na bhūtaṁ na bhaviṣyati; svadattāṁ* (etc.) . . . *gavāṁ śatśahasrasya hantuh pibati duṣkṛtāṁ*. In the Dhruvasena grant first quoted, it will be noticed that there is a slight difference (*hantuh prāpnoti kilbiṣam*), while the words are there given to Vyāsa. This verse on land-stealing was then common property, always the same in general tendency, but varying in particulars. For instance (in Ind. Ant. iv. p. 327), we have a very late one giving the usual verses as to the 6,000 years in ordure for the land-thief, and ending "as many particles of dust as a Brahman's tears gather up when he is deprived of property, so many years the kings who take it will pass in the pot-cooking hell" (*kumbhipāka*: both the general tenor and the hell are known in the Manu-treatise; other names occur, as *rauram* in vi. 56). A Cālukya inscription (ib. viii. p. 97), of the early part of the seventh century A. D., gives the verse "by many has the earth been enjoyed" etc. (something like this at the end of the Cera grant quoted above, "earth enjoyed by Sagara and others") thus: *Manugītaṁ ślokaṁ udāharanti*, 'they relate a verse sung by Manu.' It is not Manu alone, nor Vyāsa alone; even Brahmā (Pallava grant, viii. p. 168) gives utterance to these verses. The Vyāsa verse has sometimes the expression "born in ordure"—as e. g., Dyn. Rāstrakūṭa, *śak.* 675 (ib. xi. p. 109), or the Cālukya inscription (iii. p. 305) of 566 A.D. The latter is as follows:

*bahubhir vasudhā dattā bahubhiḥ cā 'nupālītā:
yasya yasya yadā bhūmis tasya tasya tadā phalam.
svadattāṁ paradattāṁ vā yatnād rakṣa Yudhiṣṭhira:
mahīr mahikṣitāṁ gṛeṣṭhāṁ dānāc chreya 'nupālānam.
svadattāṁ paradattāṁ vā yo hareta vasundharāṁ:
śvaviṣṭhāyāṁ kṛmīr bhūtvā pītṛbhiḥ saha majjati. Vyāsagītaḥ
ślokaḥ.*—(cf. Ins. in ii. 156).

Now this long quotation from the epic Vyāsa is oddly enough in that inscription of the Cālukyas which describes the king Mangaliṣvara as born in the family of *Śrīvāmipādānudhyātānām Mānavyāsugotrāṇām; Hārītiputrāṇām Calkyānām* (cf.

vii. p. 161 ff., the inscription which says the Cālikiyas, the same who are also called Cālukyās, or Calkyas, are *Mānavya-sa-gotrāḥ Hārītī-putrāḥ*, and conversant with the following works: *Mānava-Purāṇa-Rāmāyana-Bhāratetiḥāsa*, a grant made anterior to the separation of the East and West Cālukyās, a little after 500 *śaka*-era, or toward the end of the sixth century A. D., ending "and it is declared in the *dharma-śāstra* that the earth was enjoyed by many, etc.," and declaring Bṛhaspati to be the model knower of *nīti*, or kingly policy). It is to be noticed that the quotation is not made here from any Mānava code, and that the latter is not appealed to at all, though the Cālukyās especially speak of themselves as adherents of the laws given by "Manu and others." For instance, in a Cālukya grant of about 668 A. D., the King Viṣṇuvardhana is described as *Manvādi-pra-nītadharmāṣṭra-pracaritasarvalokāṣṭrayaḥ* ('the refuge of all the world, as has been inculcated by the *dharma-śāstra* laid down by Manu and others'). Compare the inscription (Ind. Ant. vi. 85 ff.) of the West Cālukyās, and that (ib. vii. 302) of the year 694-5 A. D. These quotations are not unique, and might be multiplied. A quotation from Manu as long as any meets us in the grant on the Nāgamangala plate of king Kongani for a Jain temple:

api cā 'tra Manu-gītāḥ ślokāḥ :

svadattām paradattām vā yo hareta vasundharām :

śaṣṭivarṣasahasrāṇi viśṭhāyām jāyate kṛmīḥ.

svam dātum (?) sumahac chakyaṁ dukkham anyasya pālanaṁ :

dānaṁ vā pālanaṁ ve 'ti dānāc chreṇo 'nupālanaṁ.

bahubhir vasudhā bhuktā rājabhiḥ Sagarādībhiḥ :

yasya yasya yadā bhūmis tasya tasya tatpālanaṁ.

devasvam tu viṣaṁ ghoram na viṣaṁ viṣaṁ ucyate :

viṣaṁ ekākinam hanti devasvam putrapautrakam.

The date of this grant is 777 A. D. (Ind. Ant. ii. 159). The similarity with the like verses of Vyāsa is apparent. We find such verses as these on nearly all the grants. The form and order varies, and sometimes the words—as in the Cera grant quoted above we have instead of *viśṭhāyām* etc. the words *ghore tamasi*, or the ending changes entirely into another formula:

abhidattam tribhir bhuktam śadbhiḥ ca pratipālanaṁ :

etāni na nirvartanti pūrvarājakṛtāni ca.

Preceding these we generally have the statement that he who steals land is guilty of the five great sins. The connection of the (East) Cālukyās was not merely the connection with the Mānavya (this we find quite often, e. g. in Pl. I. of the Kṛṣṇa district grant, Ind. Ant. ii. 175), but they also claim that the first king of the Solar race was the "Mānava, born of the Self-existent," who was saved in an ark at the time of the deluge (ib. Pl. III.). The Vallabhī grants generally quote Vyāsa (see above, and compare Ind. Ant. vii. 70 and other cases), and he is quoted in the Dhruvasena grant alluded to above; so that, although we often have these

verses given without any authority for them, it is perhaps he who is intended by the "Smṛtikāra" alluded to in the Morbi copper plates (Ind. Ant. ii. 257), of the sixth century (*saṃvat* 58). "Reflecting on the declaration of Vyāsa and others about five great sins, one should recall the word of Smṛtikāra;" this "word" is the same as that which occurs often under the name (*ācchettā* etc. . . . *hantuh prāpnoti kilbiṣam*), although the granting it are "given to the study of the Maitrāyaṇīya" school. In the very late inscription from Gaddak (Ind. Ant. ii. 300) which is, according to Fleet, "about four hundred years old," we find after the verses *svadattām* etc. the statement whoever injures land given to another—

so labdho vārunaiḥ pāṇaiḥ kṣipyate pūyaṣonite;
and kulāni tārayet kartā sapta sapta ca sapta ca;
adho 'dhaḥ pātayed dhartā sapta sapta ca sapta ca;

and the remark that "there would be expiation for one who slays a cow or a Brahman, even at the holy watering-places, but there would be no expiation for men who should steal the property of gods or Brahmans." The authority given is "the great sage Manu and others." This is utterly opposed to our Mānava-treatise.

Now in our Mānava-treatise there is only one verse remotely suggested by all these quotations. In xi. 26 we read: "The evil-minded man lives in the next world on a vulture's leavings who through greed injures the possessions of gods or Brahman. The gist of it all is in the Brahmā (*gītāh*) verses found in the Mahābhārata xii. 136. 2: "The property of those accustomed to sacrifice should never be taken away, nor the property of the gods; (but) a Kṣatriya has a right (*arhati*) to take from Dasyus and from those without sacrifices." These are general rules regarding property. Of land our treatise says (viii. 99): "A witness on speaking an untruth regarding land destroys everything;" and (xi. 58) "Theft of land is called equal to theft of gold." In other words, nothing from the Mānava-treatise as now possessed could have given rise to these lengthy quotations from Manu; and the fact that they are often ascribed to Vyāsa as well as to Manu points to the real worth of this Father Manu. The (prose) Sūtra of Gautama (xiii. 17) says of stealing land that "Hell (is the punishment) for a theft of land;" and Baudhāyana (ii. 1. 2. 26) makes him who sells sesamum be "born again as a worm and plunged in dogs' ordure." The tone, then, of the quotation is antique; but I fancy it never was in the Mānava-treatise. In these inscriptions, dating probably centuries after the Sūtra we have quoted above, we first find the Mānava-treatise attaining a prominence (in being placed at the head of the list of treatises referred to) which is as conspicuous as the inaccuracy of the quotations from the individual Manu.

MANU IN THE MAHĀBHĀRATA.

When Medhātithi, the oldest existing commentator on Manu, declares that a verse in the law-book contradictory to other verses is "not a verse of Manu,"* and in another place (iv. 103) suggests that the mention of Manu as author of a verse is merely to add weight to its utterance, while it is really nothing but "an old verse," he shows a sagacity seldom equaled by Hindu commentators. His acumen was not at fault. It is only a pity that he did not exercise it more often. His words I take as the text to the following discussion, which has for its object the laws ascribed to Manu by the compilers of the Mahābhārata. It is the personal Manu referred to in the epic which comes here into consideration—not the quotations from our Mānava-dharma-śāstra, but those verses which are declared to be from Manu by the addition of the endorsement "Manu said so," or "Manu, son of the Self-existent, said so."†

To these citations from Manu are prefixed a few introductory remarks regarding the sources of all law as professedly held by the Mahābhārata.

First, in regard to the frequent terms *dharma* and *śāstram*: *dharma*, which the writer in his translation of Manu prefers to render 'a rule of right,' is used for each and both of these ideas; it is a rule of action, a law, right, a spiritual right, a spiritual gain, a duty, the rule of righteous action, *ius*, *lex*, *privilegium*; *śāstram* is the treatise; containing a discussion of right, rights, etc., it is a *dharmaśāstram*.

In the Mahābhārata, as in the Mānava-treatise, the idea of *dharma* is generally that of a rule of right conformable to usage and based on it (*ācārasambhavo dharmah*: iii. 150. 28): that is to say, on such usage as is sanctioned by the good (*santaḥ*), who are distinguished on the one hand from such home-bred sinners as "hold the Vedas to be of no account," "slight the treatises" (*śāstrāṇāṃ abhilaṅghanam*), and talk merely "to murder" these treatises (*vadhūya*: xiii. 37, *passim*); and, on the other hand, from such base foreigners as the Vāhikas, the shameless habits of whose women are severely censured (viii. 44. 10 ff.), and the laxity of whose caste-order reaches such a pitch that even barbers become Brahmans (ib. 45. 3 ff.); or as the Madras people, whose "virtues" are said to be "all vices" (ib. 45. 29); for the knowledge of the Hindus had now extended over "many countries rife with varied laws" (ib. 3), probably including many people even more remote than the mixed Greeks (Yavanas), who are described as "all-knowing and particularly brave" (ib. 36). *Dharma* is briefly sketched (xii. 260. 16 ff.) in these words: "Remembered

* *amānavo 'yam ślokaḥ*: ix. 93.

† *Manur abravīt*; *Manuḥ svāyambhuvo 'bravīt*.

usage is eternal law (not all usage; for) if bad usages are introduced, law becomes mere quatch; the only law to follow is that long ago enjoined by the seers, (for) in following all sorts of usages there can only result a lack of close attention to usage in general" (*anaikāgryam*). Along with the seers, the *dharma* "declared by the Veda," or "the authority of the Veda" (*vedoktah*, *ṛutipramāṇah*), is often referred to; but it is nevertheless a variable and uncertain thing in many particulars, as declared by different experts (*ṣiṣṭāḥ*), being subject to change according to the customs of different districts, and multifarious as the castes, guilds, and families which have established it (*jāti*, *ṣreni*, *kula*, xii. 36. 19; *deśajātikulānām dharmajñāḥ*, xii. 54. 20). It is enveloped in much uncertainty, if we judge by its being so often called "subtile" (*śūkṣma*), or spoken of in like language. For instance: "*dharma* is subtile, its course we know not," i. 195. 29; "because of the subtilty of *dharma*," ib. 196. 11: see other remarks of the same sort in ii. 37. 3; ib. 67. 38; v. 36. 71; ii. 69. 14; ib. 73. 4. It is "hard to understand" (iii. 206. 41: cf. vii. 198. 44 and 42); nevertheless, when it is known it is not to be doubted, for "as a *Çūdra* departs from the Veda, so does one depart from the world if he question a rule of right" (iii. 31. 8). Other quotations will be found on this point in the Indian Antiquary, vi. 269 (J. Muir). The rule (iii. 52. 15) "not to destroy the paths of *dharma*" (*mā dharmyān ninaçaḥ pathaḥ*: cf. *çāstrapathayukta*) is enlarged by the juxtaposition of the three aims of life, right, wealth, and desire, the first of which is to be especially cultivated (iii. 33. 40, *çāstra-kṛto vidhiḥ*). The paramount authority is the rule of the seers, the fathers of old whose customs have become law (*ārṣam pramāṇam*, iii. 31. 22: cf. 23, and 24: "*dharma* is a ship, the only one for those embarked like merchants in search of the highest gain"). If any further local habitation is given this *dharma*, it is in the *Ārya-çāstra* (iii. 30. 41); and, though it has its mysteries (*dharmarahasya*, xii. 37. 7), they can nevertheless be learned, as well as its commentary (*dharmam savaiyākhyam prāptavān*, ib. 10).*

Even with this understanding of *dharma*, we find that there is no great unanimity in regard to deciding what set of rules is to be followed. Some, it is said (xii. 142. 7 ff.), "regard as binding only the ordinary practices of the world (*loka-yātrā*); this, they say, is *dharma*," "a declaration of *dharma* is given neither by the voice nor by the understanding;" with these words the Blessed one himself proclaimed the law (viz: the *Bārhaspatya-jñānam*); "one should modify† the law inculcated by the good;" "the law for a king is not laid down by the law contained in any one treatise (*nai 'kaçāstreṇa dharmeṇa rājño dharmo vidhiyate*);"

* *Dharma* as personified Genius of Right holds his ordinary position in the pantheon of the Mahābhārata, though he is sometimes shamefully treated: e. g. cursed and born as a *Çūdra* (i. 63. 96; cf. 108. 15).

† *ūheta*: not as used in Viṣṇu xxi. 2 (*mantrān ūhet*), of a mere formal change of mantras to suit a ceremonial need.

cf. ib. 14 (*pari musnanti cāstrāni cāstradoṣīnudarçinah*), and iii. 312. 18 (*crutayo vibhinnā nai'ko munir yasya matam pramānam, etĉ.*). So (in iii. 307. 15), a usage is not settled by appeal to any standard of laws, but is the "natural condition" (*svabhāva eṣa lokānām*); and again, we read in regard to a certain act, "some call it the rule given by revelation, some say no; we do not demur, for all is not settled" (*na hi sarvaṃ vidhīyate*: xii. 109. 13). The general result is important: one must act as well as he can in accordance with old customs, but at the present time there is no one paramount authority recognized.

Where then are the individual law-makers? What position does Manu hold? We find many authorities cited by name, but none of these are decisive utterances; the law-givers appear at intervals with a verse or two, which gives additional force to a law perhaps just laid down; or their opinions are divergent, and are quoted against each other; nay, even the speaker has a sentiment of his own, which he flings into the mass of quotations he has been giving from the old law-makers, with a defiant "but I think so and so," "but my opinion is this." When the law-treatises are formally quoted, there is apparently no one of them thought of as supreme, and these treatises are mentioned chiefly in the later books. A quotation is made (xii. 291. 14) by Parāçara from those who know and declare the utterances of the Veda (*brahmaçāstrajña, brahmavūdin*); and he then adds his own opinion, with a "but I," and gives it in full (*brahmaçāstra* is in 287. 41 *brahmadharma*); "the twice-born verses in revelation declare the Vaidehaka to be a Çūdra, (but) I see" etc. (xii. 296. 28); "a Çūdra woman (is not a legal wife, but) may be a mistress; other men say no to this" (xiii. 44. 12). Absolute alone is family law (*kuladharmā*), and not to be violated. The "subtle *dharma*-treatises" (v. 140. 7) may be all based on rules maintaining the "usage practiced by the ancients" (*pūrvair ācarito janaiḥ*, iii. 5. 97), but the laws of the family take precedence over all others. Like the expression used above of family law is that in iv. 5. 33; and in i. 113. 11, where a king who has just demanded (contrary to the Manu-treatise) a price for his daughter exclaims, "our highest authority is the law of the family;" and again, ib. 9, "I am unable to alter what has been established in this family, be it bad or good." Such laws are eternal, and "hell is the portion of men who have set aside the laws of the family" (*utsan-nakuladharmānām manusyānām narake niyatān vāso bhavati* 'ty anuçuçrma: vi. 25. 40). We know better than the later Hindus how much family or clan law had to do with the making of the law-treatises; but it is well to note the deference paid to it, in distinction from any legal "code," at the time of compilation of the epic.

Without prejudice, I can perceive no especial distinction awarded to any one explainer of *dharma* among the many whose works have made the various treatises. Manu sometimes heads the list, as if preëminent, but sometimes not, as if not. There is

certainly no tendency whatever to refer to a code of Manu as to an ultimate authority, although that authority is, together with that of others, recognized. Were we to compare the authorities deduced by the Mahābhārata with those referred to by the Manu-treatise, it would seem in general that we have no further advancement in the former than is represented by the standpoint of the latter. In most cases we are simply referred to "rules declared by devotees" (e. g. iii. 208. 14), to "the ordinances of the old" (iii. 209. 2), or to "a decision among the *dharma*s" (v. 178. 51); still more precisely, but vague, "the old explainers of decisions" (*niṣcitadarśinaḥ*, v. 63. 9). These are the "authorities" which settle the "subtile course of law which has many branches and no end" (*bahugāhā . . . anantikā*). The Manu-treatise has a whole chapter on the duties of a king; but in the long discourse on that subject in the epic, Manu is mentioned only three or four times, and there are no more quotations attributed to him than to other law-givers. The king should follow the treatises on polity or the polity of punishment (i. 145. 21; iii. 150. 30, *et passim*); but the "rules of the skilled," "the *dharma* joined to rule," the "custom of good men," etc., etc., sum up most of the cases where any authority is deferred to (cf. iii. 207. 62 ff.). It may be said, however, that this is the general custom; and for this reason I attempt no *argumentum a silentio* based on the vast number of verses identical with those in the Manu-treatise but not referred to it, or sometimes referred elsewhere. Still, in bringing forward those actually quoted from Manu, it is necessary to speak of this point, lest one forget what a small portion of the verses apparently taken from the Mānava-treatise is accredited to Manu. There was in these portions of the work no Vaiṣṇavic influence at work (as in Viṣṇu), suppressing the name of Manu entirely, or it would have been carried out to the end as there. It seems to me, too, when we see so many verses containing the gist of Mānava verses, but altered in form to such an extent that the whole verse-structure has been inverted, that an unbiased observer would naturally conclude that neither verse is the result of an attempt to reproduce the other, but that legal saws and maxims were couched in such general language and in such plastic swinging verse-form as to be handed down merely as a whole, while the various texts were due to the idiosyncracies of the reciter, who changed the form of the text as it happened to come to his mind. *Çāstra*-language is not *sūtra*-language. I fancy they did not lay much stress on exactness of word-arrangement in these epic rehearsals. In fact, there are plenty of instances where the same verse appears in the Mahābhārata under several different forms, although all pretend to be quotations from one original version. They did not quote, they paraphrased. The form of a Manu-verse found in the epic may, therefore, be as old as that preserved for us by the (much later) earliest commentator to Manu; the verses of the latter often appear as *tristubh* metre in the epic.

Those who fancy that a Mānava-code (even an older recension) was in any way a paramount authority at the time of the Mahābhārata may explain as they can the following passages opposed to text and spirit of the Mānava-treatise now existing. In i. 29. 18 ff.: *vibhāgam bahavo mohāt (!) kartum icchanti . . .* (but as division weakens forces) *tasmād vibhāgam bhrātṛṇām na praçaṇsanti sādhanavah*—an irreverent way of alluding to M. viii. 111. In i. 113. 12, Bhīṣma says that to give marriage-money is no sin, but is, on the contrary, a law declared by the Self-existent. In v. 34. 49, we are told that the chief food of the rich is meat. In it. 56. 36, it is declared that the ancients used to conduct business by gambling, and it was no sin. In i. 122. 3–9 we read: “the law now observed among the Kurus in the north regarding adultery has been but recently established (*na cirān mār्याde 'yam . . . sthāpitā*), and before this it was the eternal law for women to be in the same position as cattle, and not secluded at all” (see the whole adhy.). Polyandry (*bahūnām ekapatnītā*) is “eternal law” (i. 197, end).

I come now to Manu himself. God, creator, demi-god, king, and law-maker—these are his rôles. In detail:

1. As purely mythical and mystic form of the god Agni, in iii. 221. 4: *Agniṣ cā 'pi Manu-nāma prajāpatyam akārayat*; and (ib. 8) *tapaṣ ca Manum putram bhānum cā 'py Angirah sṛjat* (9) *brhadbhānum tu tam prāhuḥ*; in verse 17, his second son is Viṣvapati.

2. As demi-god, along with deities and sages, in ix. 45. 17, with Pulastya, Pulaha, Atri, etc. (cf. M. i. 35), we find a Manu (10) accompanying the gods as they assembled at a consecration and gave gifts.

In connection with the periods (*manvantara*), in xii. 349. 42: *tena bhinnās tadā nedā Manoh svāyambhuve 'ntare*; (in 55) *bhaviṣyati Manur mahnā*; (in 56) *tasmin manvantare Manvā-diganapūrvakāḥ*. These periods of the Manus have protecting influence: “May the wives of the gods, the daughters of the gods, the mothers of the gods, and the Manu-periods . . . protect thee” (xiii. 14. 38–40). The Harivaṃsa has more of this (200–400).

3. As god and creator, Manu appears in i. 75. 14 and preceding: “Manu is the originator of the race, therefore man is so called.” He has sons, and, more particularly, the Brahmins, Kṣatriyas, and others were born of him (the German Mannus has likewise three sons assigned him, clan-names of peoples). Yama is the brother of Manu; and, from v. 117. 8 ff., Sarasvatī is his wife: “The king-seer lived as happily with his wife as Agastya with the Vaidarbhi, Bṛhaspati with Tārā, Manu with Sarasvatī, Duṣyanta with Çakuntalā, Nala with Damayantī.” Secondary creators, the eight *prakṛtayaḥ*, include Manu (as above, under demi-god); here (xii. 340. 34) the list runs Marici, Angiras, Atri, Pulastya, Pulaha, Kratu, Vasistha, Manu Svāyambhuva—where the last takes perhaps the place of Bṛgu in the Manu-treatise. In a scene where punishment is personified as an active power,

we have various synonyms of *Danda* ('rod, punishment'), among which are *Asi* ('sword': v. below), and *Manur jyesthaḥ*, the oldest mortal or Manu. The origin of *Danda* also brings in Manu (xii. 122. 36 ff.) as half divinity, but concerned with penal laws; and it is interesting in furnishing a line of succession different from the ordinary: "Mahādeva gave the rod, the guardian of law (*daṇḍam dharmasya gopīram*), to Viṣṇu; he, to Angiras; he, to Indra and Marici (dual); Marici gave it to Bhṛgu, who gave it to the seers; these gave it to the world-protectors, and these again to Kṣupa; "now Kṣupa gave it to Manu" (*Kṣupas tu Manave prādād ūḍīyatanayāya ca*). If this is an attempt to trace the course of penal law, it puts Manu after Bhṛgu; elsewhere Kṣupa, here brought into close connection with Manu, is father of Manu's descendant, Ikṣvāku. We may compare with this account that in xii. 166. 28 ff.: "When the demons disregarded the barrier of the law (*dharmasetu*) given by God, the Lord produced the sword and subdued them; then he gave the sword, the guardian of law (*asim dharmasya gopīram*) to Viṣṇu; he, to Marici; he, to the great seers; they, to Vāsava, and Mahendra to the world-protectors; they, to Manu Sūryaputra ('Sun's son'), addressing him thus: 'Thou art lord of mortals; protect thy descendants by the sword (of proper punishment) which is born of *dharmā* (*asim dharmagarbhena*).' Manu afterwards gave it to his son, Kṣupa; he gave it to Ikṣvāku, etc. etc." (In 84 the eight mystic names of the Sword are given, and in 82 the Pleiads are said to be its constellation, and Agni its divinity: cf. above, where Manu is Agni, and see BR. s. *kṛttikā*.) The same list of Manus as given above is in this section found (16) in a modified form as sons of God, with the Manu omitted. The law which the demons disregarded prior to Manu's appearance was the Veda-given law promulgated by the world's grandfather (*vedapathito dharmah*); in it rest the gods, demigods, Bhṛgu, Atri, Angiras, . . . Vasiṣṭha, Gautama, Agastya, Nārada, and others (21, 22). Cf. xiii. 26. 4, Atri, Vasiṣṭha, Bhṛgu, etc. In xiii. 166 we find a list of seers in which Manu Prajāpati comes almost at the end, after Bhṛgu, Angiras, Gautama, Atri, Vasiṣṭha, and many others. Cf. also xiii. 14. 397: "Seven Manus . . . and Bhṛgu, Dakṣa, etc., preceded by Marici etc." We must not forget that, in spite of their divine nature, Vasiṣṭha, Atri, Angiras (?), Gautama, Nārada, were veritable law-givers, and the treatises bearing their names are standard works. It may be remarked that the history of creation related in this chapter from 1 ff. bears a certain resemblance to the spurious five verses that stand at the beginning of our Mānava-treatise (though of course not referred to it); and another account (xii. 182. 8) refers the relation to Bhṛgu, who tells it to Bharadvāja, beginning much in the style of the opening verses in the Manu-treatise (*Bhṛguṇā 'bhīhitam gāstram*).

The family of this divine Manu seems to be a little mixed. I have already noticed his wife Sarasvatī, his son Kṣupa, and his grandson Ikṣvāku. The last was one of those who obeyed the

laws of his grandfather respecting food, abstained from eating meat, and went to heaven for his goodness (xiii. 115). In xiii. 2. 5, he is the son of Manu Prajāpati, and has a hundred sons himself. In the passage quoted above from i. 75, we find that, though Manu gives his name to mankind, he is not the first originator of beings, as he is the son of Mārtanda; but after noting the Mānavas (men) in the race of Manu (*Manor vañce mānavāḥ*: cf. ii. 19. 6, *mānava vañca*) as coming from him in general, we have Veda, Dhṛṣṇu, Nariṣyanta, Nābhāga, Ikṣvāku, Kārūṣa, Çāryāti, Ilā, Prasadhra, Nābhāgāriṣṭa, as his ten special children, along with "fifty others, who, as we hear, all went to destruction by mutual slaughter" (*anyonyabhedāt*). According to the Purāṇas, this Ilā was a son and a daughter, time and time about. A somewhat altered list, with a fuller account of these sons, is found in the Viṣṇu Purāṇa, iv. 1. The name of the tenth son is variously spelled.

In xiv. 4. 2, Kṣupa is the grandson, and two generations intervene between Manu and Ikṣvāku: "There was in the Kṛta age (the Golden age) a Manu Daṇḍadhara Prabhu, and his son was Prasandhi, father of Kṣupa, and his great-grandson was Ikṣvāku, who had one hundred sons, the eldest of whom was Viñça, father of Viviñça" etc. (*Viñçasya putrah kalyāṇo Vivañço nāma*; not son of Ikṣvāku, as in BR.); while, according to xii. 348. 51, Vivasvant gave *dharma* to Manu at the beginning of the Tretā age (Brazen age), and Manu gave it to his son Ikṣvāku. According to xiii. 147. 23 ff., we find Govinda in the family of Manu; and the latter's descendants are given for seven generations, beginning with Anga (*Manoh putrah*), through Antardhāman, Havirdhāman, Prācīnabarhiṣ, down to the ten Pracetasas, Dakṣa Pracetasas (they are given in i. 75, before the account of Manu noted above), and through him and the Dakṣāyanyāḥ Ādityāḥ, Manu (*Ādityataḥ*) and (the personification of) Ilā as Manu's daughter (*Manoḥ ca vañcajā Ilā*), although some of these are elsewhere subject to different relationships. This Manu too appears to be regarded as identical with the law-giver, from the phrase at the beginning of the list (22), *Prājāpatye çubhe mārge, mānave dharmasamkṛte*. In the same book (149. 15), as a form of Viṣṇu is found Viçvakarmā Manus Tvaṣṭā (cf. xiii. 16. 22, where Manu is distinct from the creator, while in xiii. 14. 408 he is identical with Kṛṣṇa), and (in 17. 117) the song in praise of Viṣṇu is declared by Bhārgavaḥ (Tandih) to Gautama, and by him to Manu the son of Vivasvant, who is intended in the above genealogy. In vi. 9. 5, *Bhāratam priyam Indrasya devasya, Manor Vaivasvatasya ca*, Manu the son of Vivasvant interchanges with son of the Self-existent, as he does even in the law-books. The family of Manu goes back in part to much later (Brāhmaṇa, Nirukta, Sūtra) literature.

This mass of rubbish, chiefly from the latest book of the epic, has little worth or interest, except as showing from the very fact of its position in the whole work that the chief mythology concerning this many-sided Manu is a late product. He is god,

demi-god, and primeval man. In this last rôle, the great fish story (*mātsyakam purānam*), relating the *caritam Manor Vairavasvatusya*, needs only to be referred to (iii. 187. 57). It is a popular version of the old Brahmanic account of the flood, where Manu is Noah. Parallel passages will be found in Muir, vol. i. of Sanskrit Texts.

Passages are not wanting where Manu ceases to have any individuality, and becomes a mere type of the divinity in general, as he is of Āgni in the first quotation above: cf. ii. 19. 10: *aparihāryā meghānām Māgadhā Manunā kṛtāh*, '(the Supreme) Manu made them inseparable.' Thus in the philosophical section, xiii. 334. 27 ff., Manu as a Prajāpati is beneath Self (*ātman*). This particular passage is interesting, although the tales representing Manu as originator of laws are so shadowy as to be of slight value. "Nārada spoke to God, saying: 'Day after day men sacrifice to the universal father, mother, and teacher, to Thee, thou who art multiform! But we know not to what God or to what father thou makest sacrifice.' Then God answered: 'Self (soul) it is, or the knower of things (*ksetrajña*), imperceptible, eternal; it was by Self's command that sacrifice was made to gods and manes; the twenty-one forefathers honor this law, as do Brahmā, Sthānu, Manu, Dakṣa, Bhṛgu, etc.'"

In xii. 335. 28 ff., there is an indefinite notice of the laws of Manu, where we are on the verge of finding him more law-giver than god: "A treatise embracing *lokadharma* ('world-laws,' of this time) was declared by the seven seers; the creator extolled it (it contained 100,000 verses) as his own (*madanuṣāsanam*), and the chief authority of the world; through this shall Manu, son of the Self-existent, declare laws, and Uṇas and Brhaspati, when they are born, shall declare a treatise upheld by your (this) opinion, in the *svāyambhuvesu dharmesu*, and in the treatise of Uṇas and the Brhaspati-matam." Accordingly we find the seers' treatise bestowed first on Brhaspati (along with its branches and Upaniṣads): which reminds us of the Bārhaspatyam (xii. 59. 80 ff.), where Çankara, who first grasped *dandanūti*, reduced it to a *mahāstram* of 10,000 adhy., which Indra subsequently cut down to 5,000, and Brhaspati to 2,000; after which Kāvya diminished it to 1,000 (cf. the similar account in the introductory part of Nārada's law-book). The above is nothing but a puff of the Pāñcarātra sect. It is worth noting, however, that the work of Manu is not here alluded to as a treatise, but as "the laws." Such indefinite allusion occurs again, xii. 267. 36: "Manu, son of the Self-existent, out of pity for his creatures, declared the law, that the great fruit thereof might not perish;" and in xii. 348. 36: "To lay the foundation of *dharma*, Brahmā instructed Manu Svārocīsa, through love for the good of the worlds (cf. M. i. 62, first of the seven)." In xiii. 14. 280, we read again of the "Manus beginning with Svāyambhuva," and the "seers beginning with Bhṛgu." A fragment in xii. 36. 1 ff. might almost seem to have served as a model for the (late) introductory verses of our Mānava-

treatise. Vyāsa says: "they tell this ancient tale (Purāṇa), which is a conversation between the blest and Manu Prajāpati; wherein the seers, coming together, are said to have asked him in regard to the rules of right (*dharmam papracchur āsinam ādikāle Prajāpatim*), and Manu, son of the Self-existent, answered them (*tān evam ukto bhagavān Manuḥ Svāyambhuvo 'bravit*), 'listen to a condensed and extended account of good habits and custom.'"

4. A quaint tale, in which Manu figures as an ancient king on earth elected by a discontented democracy, will form a connecting link between the two characters (of divine being and legislator) which he sometimes bears as distinct in each, but more often unites in one. It is found in xii. 67. 17 ff.: "We have heard that a people without a king (*arājakāḥ prajāḥ*) was perishing, devouring each other like fishes. They therefore came together and made an agreement: to wit, that a voice-hero (brawler), a bully, an adulterer, and a thief should be deserted (made out-cast); all the members of all the castes without exception (were to be punished thus). After they had made this agreement, they abode by it, but were, nevertheless, soon overcome by distress; and on this account they came to the grandfather (God), and cried out for a king, (saying) 'without a king we perish; show us a king whom we may honor, who may protect us.' He indicated Manu, but Manu did not give them a kind reception, and said, 'I am afraid of the evil deed; it is hard work to govern men, especially when they are wicked.' But the people answered, 'Fear not, the guilt shall rest on the criminals; we will agree to give thee one tenth of our income in grain, and one fiftieth in cattle and gold, a maid to wed (*kanyām culke!*), and escorts to accompany thee, like the gods Indra and Kubera; thou shalt have one fourth of all the religious merit gained by thy people when they are protected by thee.' Manu thereupon accepted the kingdom, and ruled, destroying enemies and confining the people to their proper occupations. Therefore men who want increase should put a king at their head," etc. It is to be observed of this tale that the offer made to Manu by the democratic people was not munificent from a financial point of view, but very liberal as respects the religious gain; and Manu might have told them that, according to his own law-book (vii. 130), he had a right to claim a tax of one sixth on grain, or one eighth, or one twelfth; but that one tenth was not the amount designated by his law; he might too have said that he was entitled to only one sixth of their religious merit (according to M. viii. 305), and could not avoid receiving a share of demerit when sinners did wrong through his kingly negligence! (One sixth is antique: cf. Vas. i. 44.)

5. Before giving the quotations from Manu as law-giver, I group here three or four allusions to him as a mystic being. In i. 170. 43, he imparts to Sona the science of seeing (*cākṣuṣī vidyā*). In xiii. 46. 89, he runs away to heaven; and amid some

verses on women, like those in M. v. 55 ff. (none of them being here assigned to Manu), we read: "(When) Manu (was) desirous of going to heaven, he bestowed women upon men: (women who are) weak, jealous, etc." The verb is used of giving in marriage; possibly the "anxious to go to heaven" (*jigamiṣur divam*) explains the cause of the action. A conversation of very modern tone is spoken of in xiii. 98. 64, between Bali and Çukra, and told by Manu, son of the Self-existent, to Suvarṇa, and by him to Nārada. Such conversations make of Manu a mere *deus ex machina*. Another conversation will be found in xii. 201-206, in regard to metaphysical and physical subjects; the speakers being the "best of creatures" (*creṣṭhaḥ prajānām*: i. e., Manu Prajāpati) and the great seer Bṛhaspati. Occasionally, in such passages, a line reminds us of the Manavaṇ-text (as 204. 4, *yena yena carireṇa yad yat karma karoty ayam* etc.).

In i. 52, "Manu" has been explained as equal to *Mantra* (as, e. g., in Hārīta, Dh. Çās. Sang.), though it is not clear if this be the case (*Manvādi-Bhārataṁ kecid . . . adhiyate*).

Many of the quotations given above have, aside from their own character, the stamp of late origin upon them. Most of them are from the latest portion of the epic, and not a few from that book which no one can read in conjunction with the rest without being impressed by its distinctively modern tone, aside from the fact that it seems historically to be later than the time when the work was transported to Bali. Now in the quotations I give below, it is interesting to find that a similar ratio of old and new exists, according as the citations are found in the earlier or later books. What follows are the direct utterances of Manu as quoted in the Mahābhārata. I subjoin these in groups: as they are found in the earlier books, in the twelfth book, and in the remainder of the work. The twelfth book, from its especial attention to *dharmaçāstra*, deserves a particular division, being also earlier than the thirteenth, but not so early as the preceding books. Another division groups these quotations according as they are or are not found in our present Manu-treatise.

A. FROM THE EARLY BOOKS: QUOTATIONS NOT FOUND IN OUR PRESENT MĀNAVA-TREATISE.

1. *Daçacrotriyasamo rājā, ity evaṁ Manur abravīt* (i. 41. 31), 'Manu said, a king is equal to ten (Brahmans) learned in revelation.' No such statement is made in our text, while the comparison actually extant ('the teacher is equal to ten learned in revelation') will be found in Mbhā. xii. 108. 16, although not attributed to Manu.

2. In v. 37. 1 ff., "Manu Svāyambhuva said that these seventeen men smite with their fists at air, and those divinities who carry fetters in their hands lead these men to hell: (the seventeen are)

1. one instructing another who ought not to be instructed; 2. he who satisfies, or 3. pleases an enemy; 4. one who protecting women seeks enjoyment; 5. one who asks what ought not to be asked; 6. one who says what ought not to be said; 7. one high-born who does what ought not to be done; 8. one who, being weak, hates strongly; 9. one who speaks to an unbeliever; 10. one who loves what ought not to be loved; 11. one who, being a father-in-law, fools with (his son's) wife, or 12. desires honor from her; 13. one who commits adultery; 14. one who reviles women; 15. one who takes without thanks; 16. one who gives and tells of it; 17. one who initiates the bad to a (*sattra*) religious ceremony.

We find nowhere in our text such a specific list, although some of these sinners are mentioned and condemned in a general way; but there is nothing apparently to warrant the words *saptadāṣe 'mān Manuḥ abravūt*.

3. In iii. 35. 21: "Hast thou heard the royal laws, as Manu declared them—cruel, deceitful," etc. (*acrauṣis tvam rājadharmān yathā vai Manur abravūt: krūrān nikṛtisampannān vihitān aṣamātmakān*). No objection could perhaps be taken to this passage, put in the mouth of Bhīma, were it not for the word "deceitful;" but in the very rules quoted, the practice of deceit is forbidden, and all such practices as those Bhīma is urging are especially condemned (as they are elsewhere in the epic: cf. ib. 52. 22, and 12. 7, "he who acts deceitfully goes to hell"). The act urged is not one where deceitful ministers are employed, but is directed against a fair enemy (cf. 20, *ghṛṇī brāhmaṇarūpo 'si*; "but in the Kṣatriya caste cruel-minded men are born").

4. In v. 40. 10 and 11: *ajokṣā* (Comm., *ajena sahita ukṣāḥ*) *candanam vinā ādarṣo madhusarpīṣi: viṣam audumbaram gaṇḍakhaḥ svarṇanābho 'tha rocanā: grhe sthūpayitavyāni dhanyāni Manur abravūt: devabrāhmaṇapūjārtham atithinām ca . . .* That is, a formal list of things which Manu declared should be placed in every house, for the sake of honoring the gods, Brahmans, and guests. Compare in contrast to this the simple command (for no such list exists in our text) of the Mānava-treatise, that grass, earth, water, and kind words should not be wanting (M. iii. 101).

5. In i. 73. 8 ff., the eight traditional marriages legally allowed (*dharmataḥ smṛtāḥ*) are given (as in M. iii. 21); and then occur these words: *tesāṃ dharmān yathāpūrvam Manuḥ svāyambhuvo 'bravūt* ('Manu said that the merit obtained by these was in accordance with the position of each in the list'). This cannot be inferred from the order given in our Mānava-text, where we find (iii. 38) the *ārṣa* form represented as being only one-half as beneficial as the *prājāpatya*; yet the Manu-treatise (ib. 36) also ascribes this order to Manu! The quotation says further: "the four first are approved for a Brahman, six in order are for a Kṣatriya;" now the Manu-treatise says (employing in iii. 24 ff. the same word *praṣasta*, 'approved') "the singers know four are for a Brahman;" but in verse 23 the *ṣaḍ ānupūrvyāḥ* ('six first in order') are for a Brahman, and the four last are for a Kṣatriya; and, moreover,

the law-treatise says explicitly that four of these only bring good fruit, whereas the epic would permit the *gāndharva* form as "that best for a Kṣatriya" (27); so that it would seem scarcely possible to suppose that we here have any allusion to such a "Manu" as we now possess, although the last remark is made by Çakuntalā's father from interested motives. Furthermore, in verse 19, the king contracts a *gāndharva* marriage by "taking her hands according to rule and living with her," though the Mānava-treatise (*loc. cit.*, verse 43) says that this ceremony of joining hands is to be performed only when the two are of the same caste, while these here concerned are respectively of Kṣatriya and Brahman caste. It is further interesting that the verses placed between those quoted above, although agreeing with our Manu-text, are designated as "remembered" only. Now, although the Mānava-text is a little uncertain in regard to the "best" marriage for each caste, so that the implied quotation may have once been in conformity with a Mānava-treatise, there is no question as to the one decisive and formal quotation; it is not in our text, and is contradicted by it. In spite of the fact that the passage occurs in a story, it is improbable that, had the Manu-treatise existed as we now have it at that time, such a quotation could have been made from it. In a later passage (xiii. 44. 9 ff.) the account is more like the law-book.

6. In i. 74. 99, we find a passage on sons (which may be compared in general with M. ix. 158 ff.), which reads as follows: *svapatnīprabhavān pañca labdhān kṛtān vivardhitān: kṛtān anyāsu co 'tṛpannān putrān vai Manur abravūt*; although in i. 120. 32 ff. there are twelve sons given, agreeing in the main with the list of twelve in the Mānava-treatise, and preceded by *ime vai bandhudāyādāh sat putrā dharmadarṣane: sad evā 'bandhudāyādāh putrāh*. . . . But if this Dharmadarṣana be the Mānava-treatise, it is an incorrect quotation; and moreover, some of the sons are not the same as those in the Mānava-treatise; there is besides a change in the order. The most interesting part of this quotation is that Manu claims this arrangement of sons as his own, while in Baudhāyana (ii. 2. 3. 33) the son- and heir-ship is especially restricted to the legitimate son, by a quotation from Aupajandhani.

B. FROM THE EARLY BOOKS: QUOTATIONS FOUND IN OUR PRESENT MĀNAVA-TREATISE.

In verse 36 of the last extract (i. 120), there is a verse ascribed in one set of words to Manu (*apatyaṁ creṣṭham ātmaçukṛd api Manuḥ svāyambhuvo 'bravūt*), which, although not just so expressed, is found in sense in the Mānava-treatise (cf. M. ix. 166); so that we may include this, as correct in thought, under B.

1. i. 120. 36: like in thought (though not an exact quotation) to M. ix. 166.

2. In iii. 180. 35: ("The life of a Brahman proves he is a Brahman; but") *tīvac chūdrasamo hy eṣa yāvad vede na jāyate: tasminn evam matidvaidhe Manuḥ svāyambhuvo 'bravūt*: M. ii. 172.

It is odd that we should find but two quotations in all these early books capable of being verified in our present Mānava-text. In iii. 32. 39 we have one quotation which has no special significance, one way or the other: *kartavyam eva karme 'ṣi Manor esa viniṣṭayah*. The words occur in a philosophic section, where the doctrine of *karma* (meaning here energetic action) is urged, as opposed to passively receiving what fate may bring (and the moral is drawn [b] *ekāntena hy aniho 'yam parābhavati pūruṣaḥ*). M. ix. 300 (omitted by Medhātithi) is something like it.

C. FROM THE TWELFTH BOOK: QUOTATIONS NOT FOUND IN OUR PRESENT MĀNAVA-TREATISE.

1 and 2. In xii. 57. 43: The *rāja-dharma* of Manu noticed above are introduced again: *prācetasena Manunā ślokaś ce 'māv udāhṛtau rājadharmesu*. . . . These two verses (this is the first time we find a definite verse-quotation) are verses 44 and 45 (compare *Indische Sprache* 6608, given here and in Book V.), and neither of them is to be found in our Mānava-text:

44. *śaḍ etān puruṣo jahyād bhinnām nāvam ivā 'rnave:
apravaktūram ācāryam anadhīyānam ṛtvijam.*

45. *araksitāraṁ rājānam bhāryām cā 'priyavādinīm:
grāmakāmūn ca gopālān vanakāmān ca nāpitam.*

The only place where the barber (*nāpita*) is mentioned in our Mānava-text is at iv. 253, where permission is given to the Brahman to eat his food; and there is nothing that resembles "these two verses declared by Manu in his rules for kings."

3. In xii. 112. 17 . . . *budhimūlām tu vijayam Manur abravīt*; and, again, in verse 19 (said of the four kinds of acts, those of intelligence, arm, foot, and bearing burdens): *rājyaṁ tiṣṭhati dakṣaṁ saṁgrhīte 'ndriyasya ca: ārtasya budhimūlām hi vijayam Manur abravīt*. Our text contains no such pithy remark as this.

4. In xii. 139. 103: The "seven qualities of a king," as here explained, are unknown to our present Mānava-treatise, although the verse says that Manu proclaimed them: *mātā pitā gurur goptā vahnir Vaiṣṭavāno Yamah: sapta rājño guṇān etān Manur āha prajāpatih*. These are explained in the following verses: the king is like a father when he is compassionate; a mother, when he nourishes the wretched; fire, when he consumes his enemies; Yama, when he restrains the wicked (*yamayann asato Yamah*); Kubera, when he offers sacrifice; a Guru, when he gives instruction; a protector, when he protects (his people). The passages in M. vii. 4, ix. 303-311 will be at once recalled; but if we examine the two lists, it will be found that the epic category as compared with the legal one is both redundant and defective, while in the Mānava-treatise the king is nowhere compared to a mother or to a Guru (in this way, *gurum yathā* of the king in vii. 175 is another thing); still less is there such a group as this given.

5. In xii. 121. 8-12: Manu appears as the spokesman of

Brahmā, in the personification of punishment; he is the very *danda* (punishment), in whom all has its support; *vyavahāra* is established as a reckoning in *dharma* (*dharmaśāṅkhyā* *vyavahāra itī 'syate*); and then follows: *ity evaṁ vyavahārasya vyavahāratvam isyate: api cai 'tat purā rājan Manunā proktam āditah* (10). *supranītena dandena priyūpriyasamātmānā: prajā rakṣate yaḥ samyag dharmā eva sa kevalah* (11). *yatho 'ktam etad vacanam prāg eva Manunā purā: yan mayo 'ktam* *Brahmano vacanam muhat* (12). *prāg idam vacanam proktam atah prāgvacanam viduḥ: vyavahārasya cā 'khyānād vyavahāra iho 'cyate* (13). (Comm.: "Verse 11, uttered by Manu, is thus the utterance of Brahmā, heard from the mouth of Manu.")

It needs scarcely to be said that neither the definition of *vyavahāra* nor the verbatim quotation (verse 11: 'He is the very *dharma* who protects the people with well-directed punishment, he of whom the essence is indifference to pleasant or unpleasant things') is found in our text of the Mānava-treatise.

6. In xii. 152. 14 (this remark is not found in our present Mānava-text, although the nearest approach to it is found in M. v. 108 and vi. 96, where one is said to obtain heaven after "removing sin by giving up the world"): *tyāgadharmah pavitrānām sannyāsam Manur abravīt* (Comm.: "Among all the five means of purification, the meritorious act of giving is very important, but giving up the world is most important; so Manu said it was even more important than that"). The *tyāga* here is really gifts: cf. M. xi. 6, but note that even this verse is not in Medhātithi.

(7. See below, D. 2, one verse ascribed to Manu, and not in our text.)

D. FROM THE TWELFTH BOOK: QUOTATIONS FOUND IN OUR PRESENT MĀNAVA-TREATISE.

1. xii. 55. 19: Bhīṣma begins his long discourse by referring to Manu Svāyambhuva, to support the idea that the king who strews the earth with blood, killing even the Guru in battle, does well; for, *āhutena rane nityam yoddhavyam kṣatrabandhunā: dharmyam svargyam lokyam ca yudham hi Manur abravīt*. The general thought is identical with M. vii. 88-89, so that I place it among the extant quotations, although the Mānava-treatise we possess never applies the adjective *lokya* to any thing, and never says that battle is *svargya* ('conducive to heaven'), while in the Mānava-text this adjective is curiously enough applied with a negative to *prāṇivadhā* ("the destruction of animate creatures is not conducive to heaven")—where, however, slaughter of animals is intended (M. v. 48).

2. The following quotations are (from the standpoint of our present Mānava-text) half-wrong and half-right; xii. 56. 23 introduces them thus:

Manunā cai 'va . . gītau ślokau mahātmanā dharmeṣu sveṣu ('these two verses are sung by magnanimous Manu in his laws'). The first is then given, verse 24=M. ix. 321 (repeated in v. 15. 34

as an original remark by Agni); the second is not found in our present Mānava-text:

(25) *ayo hanti yadā 'cmanam agninā vāri hanyate: brahma ca kṣatriyo dvesti tadā śidanti te trayāḥ* (repeated with v. l., and not as a quotation, in xii. 78. 22-23).

Two verses follow close on these, declared to be "from Uṇas." One of them is the saying found in Manu viii. 351 (*manyus tam manyum rechati* etc.); the other inculcates the Manavan doctrine that even a Brahman learned in revelation may be slain in battle. It means a great deal, when we thus find one verse attributed to Manu which is not in our text, and immediately following one in our text referred to "Uṇas." In 34. 19, the latter is "from the Veda."

3. Of xii. 78. 31, the general sense only is found in our present text: "Manu said that those who subdue the haters of Brahmans go to heaven, etc., purified as by bathing in a sacrificial stream." What is meant is that even Brahmans may fight in battle to subdue their enemies, and that those who do so go to heaven (*brahma madviṣo niyacchantāḥ . . . brahmalokajitāḥ svargyān vīrāns tām Manur abravīt*).

4. If the "son of the Self-existent" is always Manu, the following general quotation (xii. 95. 14) may be classed with the above as correct in sentiment: *dharmena yoddhavyam*, for "so said the son of the Self-existent:" a short rule inculcating honorable fighting, which follows after detailed advice of the same sort, like the *satām dharmāḥ* of M. vii. 90-93.

5. As to the efficacy of the *aghamarṣana*, we have a quotation (xii. 152. 30) which is like the present text: *apī cā 'psu nimaj-jeta japaṁs trir aghamarṣanam: yathā 'camedhāvabhṛthas tathā tan Manur abravīt*. If we compare this with M. xi. 260-261, and again with xi. 83, we may possibly accept it as a combination of two statements: one, that a man is released from all sin by repeating the *aghamarṣana* and taking the bath, because this text releases from all sin just as a horse-sacrifice does; and the other, that even a Brahman-slayer is purified by a bath at a horse-sacrifice. Baudh. iv. 2. 15 ascribes a like remark to Manu: cf. Gaut. xxiv. 10.

6. The same Manu as that in C. 1 and 2 is credited, along with others, with praising "protection"—a remark so general that it might be applied to any Hindu law-book; but I insert it here as "verified," not wishing to strain my argument by excluding doubtful evidence. It will be noticed that we here have the *rāja-cāstram* of Manu spoken of, and that Manu is not the foremost authority. Thus, xii. 58. 1 ff.: "The essence of the king's duty is to protect, for the Lord Bṛhaspati praises it, (as do also) Viśālākṣa, Kāvya, Mahendra, Prācetaso Manu, Bharadvāja, and Gaurāṅgīras—all these deducers of *rāja-cāstra* praise protection (*rājacāstrapraṇetāro brahmanyū brahmavādināḥ: rakṣām eva praṇāṁsanti dharmam*).

7. A general quotation, the first words of which are the same

as M. iv. 2, and the spirit of which agrees with the Mānava-treatise throughout, is xii. 21. 11 and 12: *adroheṇai 'va bhūtānām yo dharmah sa satām matah: adrohaḥ satyavacanāṁ saṁvibhāgo dayā dāmah. prajānāṁ svesu dāreṣu mārḍavaṁ hrīr acāpalam: evaṁ dharmam pradhaṇeṣṭam Manuḥ svāyambhuvo 'bravīt.*

8. The next quotation I doubtfully place in this division. Bhīṣma says that all those who by their evil deeds do injury to their fellows should be officially taken in hand and restrained, adding (xii. 88. 16) "this ordinance was made of old by Manu" (*na kenacid yācitavyaḥ kaçcit kiñcid anāpadi: iti vyavasthā bhūtānām purastāt Manunā kṛtā*). The Calcutta edition (=3317) has *kasyāñcid āpadi*; and I see no resemblance to any passage we have in our present text, especially as the commentator speaks of *kiñcid* as *dattam ṛṇaṁ karaṁ vā*; but as Manu says a Brahman should not ask alms of bad men, it may pass as a half-supported quotation from our text, though it seems here to refer to the king's levying a tax. It is in form more like that spurious verse found in one of the Paris MSS. of Kullūka, after iii. 259 in our Mānava-treatise, and evidently stolen from Viṣṇu lxiii. 30 (*mā ca yāciṣṭha kaṁcana* etc.).

I have already referred to the fact that the Self-existent is sometimes the enunciator of laws which seem (by the wording of the same being like Manu-verses) to imply his "son," as in xii. 121. 12 (see above), where Manu is formally spoken of as the spokesman of Brahmā, a sort of popular mouthpiece for the commands of the Divine Being. Such remarks, however, as that in xii. 167. 46, where the Blessed Self-existent declares that no release is obtainable except by perfect disunion with birth, age, etc., or "the rule as created by the Self-existent" (viz. that warriors are cruel), v. 132. 7, cannot be taken as implying a quotation from Manu, since there are various interpreters beside Manu of the divine sayings. For this reason I make no attempt to group the "laws of the Self-existent" with those "declared by Manu;" though I cannot refrain from remarking that no universality attained by the Manavan law-treatise ever results in the Mahābhārata's condemning to hell those who despise it. If a sacred and universal law-authority is sought, we must go back of Manu, to his "father"—in other words, the epic appeals not to Manu, but, as the Mānava-treatise itself does, to the Self-existent only, when it would give the weight of the highest authority to its words: "Those who break the ordinances of the Self-existent sink into hell" (xii. 321. 30 ff.); but never is this said of those who break the ordinances of Manu. Yet the Self-existent is at times made responsible for a verse so very like that of his son's treatise, that we are tempted to believe the quoter quoted from the latter, intending to imply that he was spokesman. One such case will answer: xii. 59. 60: "There are said to be ten vices produced by anger and lust, and the teachers say that (four vices) declared by the Self-existent are produced by lust." Com-

pare with this M. vii. 47 and 50. These four are the worst of ten vices produced by lust, and there are eight produced by anger, with three of them regarded as "worst," making a new group of seven worst vices (cf. Mbhā. ii. 68. 20; xii. 140. 26: the epic admits the *yuktyā* doctrine, like the later Nītisāra, i. 49). If this grouping of vices is meant as a quotation from Manu, it is incorrect, according to our text to-day.

In all these quotations from the earlier and from the twelfth book, we have heard nothing of Manu's Dharmagāstra; when his laws are mentioned, they are spoken of as the laws (*dharmāḥ*) alone, or the Royal-treatise (*rāja-gāstra*) of Manu. In the thirteenth book we find the Dharmagāstra for the first time.

E. FROM THE THIRTEENTH BOOK: QUOTATIONS NOT FOUND
IN OUR PRESENT MĀNAVA-TREATISE.

The first quotation shows again the same odd fact: that, amid many verses which are not attributed to Manu, but are actually found in our Mānava-treatise, there is one attributed to him but not found in our text.

1. xiii. 88. 3 = M. iii. 267; ib. 5 = M. ib. 268, and so on for several verses; while, between these, verse 4 in the epic passage, although not in our present Mānava-text at all, is given as a quotation from Manu: *vardhamānatīlaṁ ṛāddham akṣayam Manur abravīt* (and therefore *tila* is mentioned before all edibles). A little further on (11): "Songs sung by manes are sung, which the Blessed Sanat Kumāra told me (Bhīṣma)"; and this song proves to be compounded of M. iii. 273-4-5.*

2. In praise of the holy pools (*tīrtha*), we are told (xiii. 65. 3) that Manu said: "the highest gift of gifts is something to drink, and therefore one should dig pools, ponds, etc." This is not in our Mānava-text, which has no praise for the later *tīrtha*; on the contrary, a gift of water is not spoken of with much admiration (compare M. iii. 202, "even a gift of water fits one for immor-

* In connection with these rules for Ṛāddha, it is interesting to note that no notion of their origin being due to Manu is found in the Mahābhārata, although that idea is expressed in the law-Sūtras. On the contrary, in xiii. 91, we find the Ṛāddha ceremony ascribed to Nimi. Yudhiṣṭhira asks (1 ff.) by whom the Ṛāddha was ordained, and at what time, and of what sort it was: was it, he asks, discovered in the time of Bhṛgu and Angiras (*Bhṛgvaṅgirasike kāle*), or by what devotee? Bhīṣma responds: Atri, son of the Self-existent, had a descendant Dattātreyā; he had a son Nimi, who became awakened (*pratibuddha*) after losing his son. He thought out the Ṛāddhakalpa, and what fruits and roots befit it; then he bade priests, and gave them gifts on the first day of the moon. But he afterward reflected: "Why have I done this thing, never done by sages of old?" Then Atri came and comforted him, telling him that this sacrifice to the manes was a law of old, seen (invented) by Brahmā himself, and that it was agreeable to the Self-existent, etc. As Atri is called the son of the Self-existent, it is plain that this epithet does not designate Manu in all cases: but that it generally does, when used alone, I think is without doubt. To whom, however, does this refer, in xii. 293. 11: "A Vaiṣya should make gain, honoring the only son of the creator (Dhātara) who was born of the Self-existent (*svayambhū* . . . *asṛjat* . . . *dhātaram* . . . *dhātā 'sṛjat putram ekam, tam arcayitvā vaiṣyaḥ*, etc.)"?

talitv," but only because it is rendered sacred by the *grāddha*; while "water-giver" comes at the beginning of a list of those whose gifts are mentioned in ascending value; and, ib. 267, water is a subordinate gift). Should any great stress be laid on the fact that Manu occasionally comes first in a list of law-givers, it would be well to note that in this passage he is preceded by Atri (*pitā-mahasūta*) and Hariṣcandra (*manujendra*), with their several verses on desirable gifts (cf. below, xiii. 115. 12).

3. In xiii. 61. 34 is discussed a rather abstruse point in regard to the proportion of religious merit or demerit obtained by a king as a result of protecting or neglecting his people. After stigmatizing the king who does not protect his people as a *rājakulī*, the speaker says (35): "The king incurs one fourth of all the sin committed by his people when they are not protected; now some say the whole (sin) comes upon the king, (or) moreover, a half. This is their decision; but our opinion is that (the sin incurred by the king) is one fourth (of the whole), having heard the ordinance of Manu" (*caturtham matam asmākam Manoh grutvā nuçāsanam*). Cf. above in the tale of Manu as king (xii. 67. 17 ff.), and xii. 75. 6, 7; 88. 18-20, here given as *gruti*. Our present text awards this proportion of the sin only in case of incorrect decisions at court, where there are more than two parties to divide the sin among (M. viii. 18): but in the case at hand it emphatically says that the proportion is one sixth, or all, if the tax taken by the king (to insure protection) amounts to one sixth (viii. 304-308); while Yājñavalkya's law-treatise sets it at one half. The good obtained by a king who protects well is in the same proportion: according to our Mānava-text being one sixth, according to the Manu of the Mahābhārata being one fourth.

F. FROM THE THIRTEENTH BOOK: QUOTATIONS FOUND IN OUR PRESENT MĀNAVA-TREATISE.

1. xiii. 47. 35 *et circa*: There is a great difference in what one calls a Brahman's "wives;" the wife of the Brahman caste is best and highest; she alone waits upon him, etc. "Even in the treatise laid down by Manu this is perceived to be the eternal rule of right" (*Manunā bhīhitam gāstram yac cā 'pi . . . tatrā 'py eṣa . . . dr̥ṣṭo dharmah sanātanaḥ*). Compare with this M. ix. 85. Another quotation in this same chapter, agreeing with the laws of our Mānava-treatise, is attributed not to Manu, but to the Self-existent (ib. 58): "The eldest has the best share, the pick of the property; this is the rule of partition formerly declared by the Self-existent (*dīyavidhiḥ pūrvam uktā svayambhuvā*)."

2 and 3. xiii. 44: Contains two quotations strictly Manavan. In verse 18: "A man should marry a girl who is not a Sapiṇḍa on the mother's or of the same family on the father's side (*asapiṇḍā mātur asagotrā pituh*). Manu declared this law (*taṁ dharmam Manur abravīt*)." Compare M. iii. 5. In verse 23: "Manu does not approve of cohabitation with one who has no desire" (*na hy akāmēna saṁnyāsam Manur evam praçāṁsati*).

4. xiii. 115. 10 ff.: A curious passage in regard to the eating of

meat, which begins with the statement that the seers had discussed the subject very thoroughly, and had all agreed that (10) if one firm in his vows should sacrifice month by month with a horse-sacrifice, or, again, should abstain from eating honey and meat, the reward in each case would be equal (a slight variation of verse 16, below); then follow the opinions of some of the ancients:

Verse 12: *na bhakṣayati yo māṁsān na ca hanyān na ghātayet: tam mitrān sarvabhūtānām Manuḥ svāyambhūno 'bravīt.* Compare M. v. 50, where the first clause only is given, with the result *sa loke priyatām yāti*, etc.

Verse 14 gives M. v. 52 *a* verbatim, and in *b* ascribes the words to Nārada (*Nāradaḥ prāha dharmātmā niyataṁ so 'vasīdati*).

Verse 15: Brhaspati declares that by abstaining (*nivṛtṭyā*) from honey and meat one in effect makes gifts, sacrifices, becomes devout. Compare M. vi. 14. In M. v. 56 it is said that abstinence in eating meat and drinking intoxicating liquors brings great reward, although no fault exists in the practice. The same antithesis of *pravṛtti* and *nivṛtti* is found Mbhā. xiii. 115. 85.

Verse 16 is in *a* the same as M. v. 53 *a*, except *māsi māsi* for *varṣe varṣe*; in *b* it is declared to be the speaker's opinion (*na khādati ca yo māṁsān samam etan matam mama*). Bhīṣma assumes the responsibility for this statement, though the remark is above, verse 10, accredited to the sages in general.

In 116. 11 *a*, we find 115. 14 *a* repeated, but not ascribed to Nārada; *b* adds that such a sinner is a very mean and harmful man, as does Manu.

5. In xiii. 115. 53 we are told, after a description of the meat proper for a pure sacrifice, that Manu declared other kinds sinful (*ato 'nyathā vṛthāmāṁsam abhakṣyam Manuḥ abravīt: asvargyam ayaḡasyān ca rakṣavat . . .* (similarly in 116. 15, we find *rākṣaso vidhiḥ*, but only *ucyate*, 'it is said').

The sentiment of the first portion of this our Mānava-text also assigns to Manu, in saying that cattle may be slaughtered, but only at a sacrifice, and on no other occasion, "said Manu" (M. v. 41); the comparison of the second part is given in M. v. 50 (*piṣācavat*), and previously in v. 31. On this same point I notice that the words of M. v. 39 are in Mbhā. xiii. 116. 14, given as a *ṛuti*.

The general result of this passage for our inquiry is this: that the whole accords with our present text in the Mānava-treatise, inasmuch as the latter permits meat-eating only at a sacrifice. But, in particular, one fourth only of the verse here ascribed to Manu is found in our present Mānava-text; while half a verse extant there is here ascribed to Nārada, another half-verse (except for a small *v. l.*) is claimed as the speaker's opinion, and a general sentiment in the same connection like one found in the Mānava-text is quoted from Brhaspati. Another curious thing is that in the *rākṣaso vidhiḥ* quotation (cf. M. v. 31), where the words are almost identical with those in our Mānava-text, it is not noted as a quotation from it; but where the words vary,

introducing a new element not in the corresponding verse of our present Mānava-text, then it is assigned to Manu!

6. Although Dakṣa is called Prācetasā, I think it is probably to Manu that this epithet refers in xiii. 46. 1 (we have had already the same epithet twice applied to Manu): "The sages of old repeat the word of Prācetasā (which is), 'it is not a sale if the relatives of a woman do not receive anything; for (2) it is an honor shown to the girl'" (like M. iii. 54). The commentator refers the authority to Dakṣa. The meaning is, that valuables given by the bridegroom at a marriage, if the relatives of the bride do not take them, are not to be regarded as constituting a sale of the girl; they are a token of respect to the girl herself.

7. A doubtful quotation occurs xiii. 68. 31: "Manu, the knower of *dharma*, has declared (*prāha*) that the spiritual merit (*dharma*) is endless (*akṣaya*), both of the man who gives a present when abiding firmly in the right, and of him (who is of similar sort) to whom (the former) gives (the present)." The gist of this is in M. iv. 235, although no such quotation is actually extant in our text; and the Manu-treatise says about the same regarding presents from a king in vii. 86 (cf. 82, 83, *akṣayo nidhiḥ*), although only half the idea is here expressed. We may perhaps assume that it is a quotation made from the general idea, and based on what we find in our present text.

The statistical result obtained by grouping these quotations is as follows:

Quotations found in Mbhā., books	Verified (in our Mānava-text).	Unverified.
i.-xi.	2	6
xii.	8	7
xiii.	7	3
	<hr/> 17	<hr/> 16

Those "unverified" are not to be found in our present Mānava-treatise, either in word or thought. Those "verified" are of two sorts: *a*, where the words quoted correspond to the words found in our text; *b*, where the sentiment only can be verified in our text. It may sometimes be open to question whether a quotation I mark as verified in sentiment (*b*) is not really meant to be a direct quotation in words, and therefore strictly unverified. As this is impossible to settle, I have in each case given the benefit of the doubt, which I think is also more in harmony with the Hindu method of making quotations. Such a subdivision of the verified quotations gives us: i.-xi., *a*. 1, *b*. 1; xii., *a*. 2, *b*. 6; xiii., *a*. 2, *b*. 5. The quotation from iii. 32. 39 I have not reckoned in either group. If we discriminate between precise verbal quotations and general ones of the thought only, we shall have:

Verified verbal quotations	5
Verified general quotations	13
Unverified quotations	16
Not counted	1
	<hr/> 35

There is, however, a great difference in the correctness of the quotations from the early books (speaking of course always from the standard of our Mānava-text). The twelfth book, with its numerous chapters on law, forms as it were a bridge between the other two sets. But take books i.-xi. as a type of the earlier, book xiii. as a type of the later literature. In the former we find six quotations ascribed to Manu, and not found in our present Mānava-text, against two verified by our text; in the latter, only three not found in the present text, against seven verified. The proportion is almost reversed.

An objection may perhaps be presented against this division, to the effect that one has no right to separate the parts of one work so sharply into different classes, there being much that is modern encased in what belongs to the older part of the epic. Though this is true, I think that in general the separation holds good, and quite enough so for the use I have made of it. The quotations from i.-xi. come in general from the earlier portion of the work; no one can doubt the late origin of the thirteenth book, who reads it in connection with the first portions or with book twelve.

The explanation usually accepted for verses such as the unverified quotations I have given above is, that the older recension of the Mānava-treatise differed greatly from the present, was much longer, and contained probably those verses which have since dropped out of the text; so that, as quotations from "Manu," these citations in the Mahābhārata may have been really drawn from an older recension of the Mānava-treatise (Çāstra); or, if not from that, from the still older Dharmasūtra which grew into the Çāstra, passing out of prose into metre, becoming popularized, and resulting in a different work altogether.

This easy and sweeping explanation accounts for everything, and is therefore eagerly accepted. To me it is unsatisfactory. Is it probable that the Dharmagāstram ever was larger than now? I think not. The Hindus say so, but that proves nothing. Their Brhad- was identical with their Vṛddha-Manu, and meant no more than "the great," not necessarily implying a *vaco brhattaram*. The law books grow, not dwindle, with the years. Kullūka accredits more verses to Manu than Medhātithi did, and the latter is but a few hundred years earlier than the former. In the more modern Nandinī version, still more verses have crept in. Have they not done so always? Again, in the Sūtra, granting that there were verses not preserved in the change to Çāstra, what still shall we say of verses pretending to be from Manu and contradicted in the present Mānava-treatise? Is it probable that these were the rules which lay back of the metrical recension? Did the latter develop into opposition to the Sūtra?

My own view is different, so different that I present it with some hesitation; but it seems to me more reasonable. I have endeavored in this essay to point out the position held respectively by Manu and by the Mānava-treatise. They were quite different.

Manu was an ancient demigod, sage, authority on various matters; his words were decisive. But the treatise of Manu was a work seldom quoted, and that chiefly in the modern portion of the epic. Not more than half the remarks ascribed to Manu are found in the present Mānava-treatise which the Hindus call the Manu-treatise; but, the further on we come toward modern times, the more often the quotations from Manu fit to our present Mānava-text. From these data I draw the conclusion that the Cāstram was in great part collated between the time when the bulk of the epic was composed and its final completion; that, previous to its collation, there had existed a vast number of sententious remarks, proverbial wisdom, rules for morality, etc., which were ascribed, not to this "treatise of Manu" at all, but to the ancient hero Manu as a type of godly wisdom. These I conceive to have floated about in the mouths of the people, not brought together, but all loosely quoted as laws or sayings of Manu; and these sayings were afterwards welded into one with the laws of a particular text called the Mānavas—a union natural enough, as the two bodies of law would then bear the same title, although the sect had no connection with Manu except in name. I fancy this sect built up their *ācāra* ('usages') and *kuladharmā* ('family law') out of their own heads, not ascribing them to Manu; then, seizing this distinct mass of "Manu's sayings," they appropriated them, and the two became one; but that most of them were taken in at a much later date than that when their *dharmasūtra* passed into a metrical *gāstra*. It is thus easy to see why we should find in the Mānava-dharma-gāstra such a number of verses ending with "so said Manu." If Manu says all, why emphasize a few? If all are from the Mānava sect, why insert here and there a Manu-verse? According to my theory, these Manu-verses found in the Mānava-treatise were simply caught up and drawn from the hearsay of the whole Brahman world, keeping their form after incorporation with the Mānavas' text. This was especially valuable, because every time a fraud was intended, they could invent a verse and insert it in the old text. They had so many "Manu saids," that it would be difficult to dispute a new one. Another point is explained by this; for I find that the "Manu said" verses in the Mānava-treatise are often just those which are undoubtedly cases of later and fraudulent additions. Take the two verses in ix. 182, 183 ending in "Manu said"—the oldest commentator does not have them; take the verse on "written agreements," stolen from the later Nārada—it ends with "Manu said." Make a wide application, look at other law-books (for other law-books beside the Mānavas' have caught up or invented these quotations from Manu, and it is unwarranted to assume that the Manu-quotations in the Dharmasūtra of Vasīṣṭha, Gautama, etc. are from the Mānavas' Dharmasūtra, although some may coincide). Doctrines utterly at variance with the Mānava-treatise are palmed off upon us with a "Manu said:" doctrines of which we are able to say that they never existed either in the Mānava-

(metrical) treatise or in the (prose) Sūtra. Take for example the Vyavahāra Mayūkha-quotation under the head of division of property (p. 46, ed. Mandlik). The writer, quoting from Nārada on the proper division of acknowledged goods, and stating what should be done when there is a suspicion of goods having been secreted in order to escape division, says: *dr̥ṣyamānā vibhajyante, koṣam gūḍhe* 'bravīn manuḥ, 'things visible are divided; Manu said the ordeal by sacred libation (should be applied) in a (case where goods are) concealed.' Now this form of ordeal is not only not in our Mānava-text of to-day, but, the further we go back, the more impossible is it that it ever could have been there; for it represents a time posterior to that described by the Mānava-text, even as we have it now—the time of subsequent law-books, where this kind of ordeal is first described. Of course it could not then have been in the still older Sūtra. In short, it is a modern forgery, endorsed with Manu's name to give it respectability. We find an ever increasing preponderance of quotations more and more doubtful as we come on toward the later literature. That mass of rubbish contained in the Dharmagāstrasaṃgraha, most of which does not deserve the name of Dharmagāstra, has instances enough to prove this.

Such was undoubtedly the Hindu custom. A most interesting case has recently come to my notice, in comparatively modern literature. Among the Notes on Buddhist Law recently published in India are (iii. p. 25: Manvoo-wonana-dhammathat) some chapters on marriage and divorce. Here we find two sections (20–21), the last of which is the only one in all the passages given (pages 1–33) which is referred to Manu, and this not only does not occur in the Mānava-treatise, but is taken directly out of the Buddhist Anganasutta of the Sutta Pitakam; while the many passages plainly from the Mānava-treatise are not ascribed to Manu; and in the corresponding section of the Menu-khyai we often find in the same way sentences not in the Mānava-treatise but attributed to Manu ("from ignorance or design," says the editor). The best example in this series of *dhammathats* is found in the Wagaru-dhammathat, iv. pages 1–5, where, out of thirty-two verses, eleven injunctions are ascribed to Manu, and none of these are found in our Mānava-text; while the passages taken directly from our Mānava-text are not ascribed to any one. Thus, on marriage, verses 4 and 6 are ascribed to Manu, while verse 5 is not; but verse 5 is in our Mānava-text, while verses 4 and 6 are not. Prof. Forchhammer observes, page 3 of his introduction, that Manu is frequently made to endorse the precepts of the Vinaya Pitakam, (by adding) "thus Manu has decided." I do not quote the acts of the Buddhists to prove those of the Brahmans, but I give this as a good example of a custom I believe from other grounds to have been long current among Hindu law-makers. For the earlier law-books I claim, therefore, that a quotation from Manu not verified in the present Mānava-text does not indicate at all that it ever was there. The older the

Sūtra, the more likely that the Manu-quotation is one like those "Manu divided his property among his sons," "whatever Manu said is curative," quotations found through the Brāhmaṇa literature, and referring only to the divine or semi-divine being—while at the same time it may happen that a quotation given in one Sūtra from Manu may be found in the Mānava- (metrical) treatise, and have once been in the Mānava- (prose) Sūtra, being current property among the Sūtra-kāras. The kinds of quotations attributed to Manu then in Sūtra, Ṣāstra, and epic, are of motive and substance; the motive may be to inculcate some new strange doctrine, in which case the quotation is deliberate forgery; or it may be to remind the hearer of some old saying in harmony with what the writer wishes to inculcate, and so calculated to strengthen his assertion—in which case he probably quotes from some of the "sayings of Manu" familiar to the popular ear. The substance of these quotations is either wholly general, proverbial moral teachings etc., or they are special, and bearing on some precise point of law or custom. The last are least in number, till we come to the very modern law-compilations and digests; where, in my opinion, there is more intentionally fraudulent quotation than correct citation, some texts quoting from one authority and others the same from Manu, who is evidently a mere *deus ex machina* in a great many cases; and the quotation from him does not imply that it ever was really taken out of any law-treatise. The Mahābhārata remarks, iii. 313. 110: *pañcakāḥ* and *pāñcakāḥ* and other *ṣāstracintakāḥ* are *sarve vyaśanino mūrkhāḥ*. In my opinion, the devotees of the legal Ṣāstra were more knaves than fools.

It is difficult to realize, without examining the matter in detail, what a mere trifle the quotations given in this paper from Manu are, when compared with the vast number of verses corresponding to those in the Mānava-text, but not referred to it or to Manu: most of these latter being given without any authority, some of them being marked as *ṣruti*, and others attributed to entirely other sources. Another fact must be borne in mind, lest, seeing so much of Manu, we fancy he is *par excellence* the law-maker referred to. He is not. Others share the honor with him. Among these he is sometimes placed in the most conspicuous position, sometimes not. The late inscriptions are prone to place Manu, who at that time was as vague a personage as now, at the head of their lists of law-givers, and, in Hindu parlance, as the primary maker of Dharma-ṣāstra, though it is not the Mānava-laws, but the laws of Manu, they quote; and yet they had their Mānava-dharma-sūtra, and probably by this time their Mānava-dharma-ṣāstra. In most cases, I think we shall find that "the laws of Manu" are much later than the "Mānava-laws;" though some "sayings of Manu" may go back beyond the time of the Mānavas'

text-book. It seems to me at any rate certain that to refer "Manu said" verses out of the Sūtra and later literature to what may have been lost from the text-book of the Mānava sect is indefensible.

I have touched above upon two points which I wish to elucidate here more fully, by way of supplement to the discussion already given. They are: 1. the quotations from Manu in the late digests of law; 2. the quotations from Manu in the Mānava-treatise itself.

1. I have already spoken of the trial by sacred libation which is accredited to Manu, and shown that it was in reality a later product. It occurs first in Yājñavalkya's list, and is given in full by Nārada. The Manu-treatise has but three kinds of ordeal; and it is unlikely that a Sūtra would have contained what was only known to later times (see on this point Schlagintweit's *Gottesurtheile*). I append other improbable quotations from the Vyavahāra-Mayūkha.

On page 77 of Mandlik's text, we read: "he who receives what ought not to be given and he who gives it shall both be punished like thieves, and be made to pay the highest fine, (said) Manu." Other texts also refer this to Manu. It is not in our treatise. On pages 50 and 51, we have close together these two verses: "If any common property is discovered after partition, that partition should not be recognized; it should be made again, (said) Manu;" and, "when there is a doubt of partition among co-heirs, the partition must be made again, even if (the heirs) have taken separate abodes, (said) Manu." Neither of these is in our treatise, though here and elsewhere (Mādhava etc.), they are attributed to Manu. On page 61, we find a quotation subsequently attributed to Brhaspati given to Manu (Kull. to M. ix. 192). On page 85 (*sa eva* means Manu), Manu is credited with saying, "As they have been enjoyed, reckoning from the time of entry, a house, door, shop, etc., shall be possessed and not removed." This is not in our treatise; and by other late works it is given to Brhaspati (Vīr., Kām., Mādhava).

Brhan-Manu is mentioned once in the Vyav. Mayūkha. It is an instructive passage. We find in our treatise, at ix. 142, a verse respecting the relationship of adopted sons to their natural fathers; now a verse with this is quoted in the Dattaka Mīmāṃsā from Brhan-Manu as a genuine verse, while the Vyav. Mayūkha quotes it only to say of it "we know of no foundation for this quotation" (*tasya mūlāṁ na vidmaḥ*: page 45). In the Mitākṣarā (ii. 5. 6), we find another difference with our Mānava-text (v. 60) attributed to Brhan-Manu. Shall we say that this is an old verse lost in our text, or also that "we know of no foundation for it?" Two quotations occur in the Vyav. May. from Vṛddha-Manu (so in Vīramitrodaya); both are simple additions to our text, on the subject of the responsibility of servants, and the obligation to pay them "half wages" if they are engaged and dis-

missed before the expiration of the time of the agreement. Viramitrodaya gives them to Br̥han-Manu.

That Br̥han-Manu and Vṛddha-Manu are one is proved by the fact that e. g. the Dāya-bhāga, xi. 1. 7 (Stokes, page 305), attributes to Br̥han-Manu a verse on the behavior of the widow of a childless man (wherein she is the sole inheritor), which in the Mitākṣarā is given to Vṛddha-Manu (ii. 1. 6).

Other texts than the Mitākṣarā and Vyavahāra Mayūkha give late quotations from these two. The Dāya-bhāga, ix. 17 (Stokes, page 294), has one which says: "The sons of the Brāhmaṇī shall take the land which was received as a pious gift; but all the sons of the twice-born castes shall take the house, as well as the field which has come down from ancestors." This is opposed to the Mānava-law, and is plainly a late verse, in the interests of Brahmanhood. I do not think it profitable to go with any fullness into these modern texts, but will quote two or three to show their uniformly late appearance. Dāya-bhāga, ii. 23 (Stokes, page 204): "The support of persons to be maintained is the approved means of gaining heaven; but hell is a man's portion if they suffer; therefore let one carefully maintain them.—Manu." This is carried over from the relation of king to priest. Dattaka-mīmāṃsā, i. 9 (Stokes, page 533), quotes from Manu, "a son of any description must be anxiously adopted, for the sake of the funeral cake etc." This is opposed; for our treatise limits in kind the adopted son. It is also ascribed to Manu in another late treatise, the Dattaka-Candrikā. These two texts both ascribe the following to Manu (D. M. v. 45; D. C. vi. 3; Stokes, pages 595-662): "He who adopts a son without observing the rules ordained should make him a participator of the rites of marriage, but not a sharer of the wealth." This is also not Manavan in its sentiment. Let us also remember that the earliest law knew nothing of adopting sons (Sūtra of Gautama) with such distinctions; therefore it cannot be antique.

"Joint property cannot be given," is a quotation given to Manu by the commentators to Dāya-bhāga; most authorities ascribe it to Br̥haspati (D. B. ii. 27; Stokes, page 206). So a passage of Br̥haspati according to Dāya-bhāga ii. 43 (Stokes, page 212) is really in M. ix. 156.

From these random quotations the theory I have advanced seems strengthened. Manu-quotations are mostly very modern in tone, and do not prove old verses lost from our text. As to Br̥hat or Vṛddha-Manu, I think he was an invention, and probably as worthless an addition to legal literature as the many other Br̥hats and Vṛddhas which have been preserved to show how late and spurious such works on the face of them are. Vṛddha does not mean 'old,' but 'bulky,' I think.

2. Unverified quotations from Manu in the Mānava-dharma-śāstra. By this (to a Hindu) somewhat paradoxical title I mean those verses in our present Mānava-treatise which are quoted as coming from Manu by the usual stamp at the end, a "Manu said

so," or a "this is the ordinance of Manu." Prajāpati, though usually interpreted as equivalent to Manu, I do not include here, or in other quotations. This is the last point of view from which I shall attempt to investigate these quotations, for I have gone carefully through all those contained in the later Smṛtis of the Dharmagāstrasaṃgraha published in Calcutta, and do not think them worth alluding to, although they support my position. Even the few verses of Nārada quoting Manu I omit, though here too the searcher will find ground for my argument. The Mānava-treatise is clearly the most difficult portion of the investigation, as the whole treatise in which the Manu-verses are found is attributed by the Hindus to Manu. I do not want to strain the argument, and I admit frankly that there are verses stamped in this manner which I cannot prove to be modern additions to the whole work. It is sufficient for my purpose, however, to show what I am convinced is the case—that since the Mānava-treatise was completed, spurious verses have crept in; and that, in most of the cases where we find verses ending with "Manu said," there are signs of their being later additions when they are found in the late portions of the work, signs given by text-criticism, and entirely apart from the fact that they bear this formula. According to the theory I have advanced, such verses ought to be found most frequently in the portion of the work latest developed and most enlarged. Now, not giving credence to Dr. Burnell's theory that the treatise was composed for a king as a guide to his administration (a theory which, as he has baldly stated it, seems to me at variance with the historical development), and accepting the generally received opinion that the Mānava law-book is a normal growth out of the Mānava (prose) Sūtra, it will be probable at the outset that the chapters on civil and criminal law will contain most of these unverified, i. e. surreptitiously inserted, verses, since these chapters (viii. and ix.) have probably suffered most enlargement since the days of the original Sūtra.

In the Mānava-treatise, after deducting the references to Manu as maker of the treatise (i. 1, 102, 118, 119; xii. 117; inferred, i. 4, 33, 34, 58, 60, 61, 79; as in general the Supreme, ix. 327; xii. 123), and after the general authorization of the work (ii. 7), which says that all laws proclaimed by Manu are directed in the Veda, we find twenty-two quotations referred emphatically to Manu. Of these, nine are in the portions of the work devoted to domestic and ceremonial rules and general laws of conduct, which we can call in general the part most nearly corresponding to the original form (Lectures iii.–vi., x., last part; none in ii., vii., xi.); while thirteen are in the portion devoted to civil and criminal law, a part that in the Sūtra literature holds a subordinate position, but keeps ever expanding (Lectures viii., ix.). It is in the latter portion that we should expect to find doubtful quotations.

In detail they are as follows.

A. FIRST GROUP:

1. iii. 36. Certain qualities have been declared by Manu for each marriage. The matter is old. The corresponding verses in Mahābhārata, while differing in detail, show that its authority as a Manu-verse was general, although the epic quotation is incorrect.
2. iii. 150. Manu declared a Brahmanic thief, eunuch, or infidel as unworthy of *havya* and *kavya*.
3. iii. 222. Manu declared that a son or grandson might partake of the Ārddha, when the father was dead.
4. iv. 103. Manu declared a suspension of study on certain occasions. Medhatithi says this is an "old verse," and by some regarded as opposed to verse 102, but it is supported by the Sūtras.
5. v. 41. Manu said cattle should be slain at sacrifice only. This is contained in Vasiṣṭha, and was probably in the Mānava-Sūtra.
6. v. 131. Manu said that beasts killed by dogs, Cāṇḍālas, and (other) Dasyus were pure.
7. vi. 54. Manu Svāyambhuva said that the vessels fit for ascetics were gourd, bowl, pot, rattan. Doubtful; not in Medhatithi's commentary; *alābu* (gourd) occurs nowhere else; subject a disputed one.
8. x. 63. Manu declared a condensed rule of duty for the four castes.
9. x. 77, 78. Manu Prajāpati said that some of the duties of the Brahman cease with the Kṣatriya and Vaiṣya.
There is no reason for questioning the antiquity of any of these verses excepting the seventh, which is doubtful.

B. SECOND GROUP.

1. viii. 124. Manu Svāyambhuva declared ten places where punishment may be administered.
2. viii. 139. Ordinance of Manu regarding fine for debtor. This contradicts verse 59, and, according to Nārāyaṇa, is wanting in some MSS. (cf. verse 51).
3. viii. 168. Manu said that what was written by force was illegal. Jolly says this is stolen from Nārada iv. 55; it is the only distinct recognition of writing in the work, and is clearly interpolated.
4. viii. 204. Manu said that a suitor on a certain occasion might take two girls "at the same price." This contradicts the older law, where sale was not allowed, and contradicts the older sentiment of the treatise itself (iii. 51-54; ix. 98), where this implied purchase of wives is denounced.
5. viii. 242. Manu said that a cow with calf, bulls, cattle of gods, with or without keeper, should not be fined for injury. Vas., Baudh., Āp., Gaut., have nothing like this. Yāj. (ii. 163) omits the cattle of gods in a like list, and says the law holds only when there is no keeper. Gaut. in general says a cow is to be

- fined (xii. 22). Viṣṇu gives the rule only for bulls and cows with young (v. 150); if this refers to the sacred bulls of the gods (as in Viṣṇu lxxxvi.), it is quite late (cf. Jolly to Viṣṇu).
6. viii. 279. Ordinance of Manu: the limb of a low-caste man is to be cut off, if he injure a high-caste man therewith.
 7. viii. 292. Manu says there is no penalty for a driver when straps, girth, etc. break. In verse 290 we have a general *āhuḥ* ('they say'); the first part is not in Medhātithi's gloss; the matter is late.
 8. viii. 339. Manu said it was no theft to steal fruits and roots of large trees, fire-wood, or grass to feed cows with. This rule is ascribed by Āp. (1. 28. 2 ff.) to Vārsāyaṇi, though here to Manu; it appears to be a late restriction on verse 331.
 9. ix. 17. Manu ordained certain traits for women (probably Prajāpati, the creator, is meant).
 10. ix. 158. Manu Svāyambhuva declared that six were sons and heirs; six, sons and not heirs. Only the later law knows the twelve kinds of sons. The parallel verses in the Mahābhārata contradict the arrangements of the sons. The fact of its reference to Manu is nullified by the lateness of the matter.
 - 11, 12. ix. 182, 183. Manu said that all brothers became fathers by one son; and that all wives became mothers by one son. These are not in the oldest commentator (Medh.); their matter and juxtaposition alone make them suspicious; verse 182 first crops out in the Mitākṣarā.
 13. ix. 239. A curse on sinners as "ordinance of Manu;" very late in matter and suspicious in form; unexampled in early literature.
- In this group, only 1, 6, and 9 are of an antiquity not open to reasonable question; 5, 7, 8, 10, and 13 are of doubtful antiquity; and of the remainder, or 2, 3, 4, 11, and 12, there is every reason for suspecting the character.

To sum up: there is then in most of the nine cases in group A. (so far as the text-criticism goes) no reason to doubt the ancient character of the verses.

There is in group B. no reason for doubt on this point in three of the thirteen quotations, but some reason in five of them; while in the remaining five there is every reason to suspect their antiquity, and consequently to regard them as forgeries. The proportion is again significant. Even in the "treatise of Manu" itself we find the tendency to interpolation increasing in the later portions, and the "Manu" verses most frequent and most suspicious are in the most modern chapters. We have learned that the "treatise of the Mānavas" did not, as the Hindus think, come from Manu. It seems probable also that the "verses of Manu" do not, as European scholars assume, necessarily come from the Mānava-treatise.

NOTE: To the matter of the introductory remarks add Manu=*mantra* in xiii. 7. 18. The fulness of quotations in book xiii. contrasts with the lack of any in books xiv.-xviii., which in form are earlier. Even the Rig-Veda foreshadows the above process: x. 53 has five original and six added verses (Grassmann); in one of the latter we find Manu spoken of for the first time in the hymn (6. *Manur bhava*), unless the word be here better taken as an adjective.

ARTICLE VIII.

THE ARABIC BIBLE

OF

DRS. ELI SMITH AND CORNELIUS V. A. VAN DYCK.

BY PROF. ISAAC H. HALL,
OF NEW YORK CITY.

Presented to the Society, October 25th, 1883.

THE sources of this account are, 1. personal inquiries and investigations, made both in this country and at Beirût; and 2. an account written by Dr. Van Dyck himself, and kindly transmitted to me in May, 1883.

Though several persons are no longer living who would have been able to add a number of interesting, if not important particulars, and to supply facts now recoverable only by inference, yet perhaps a little more might still be learned at Beirût by oral inquiry than I am now able to accomplish by letter. Several persons who are still living, both native and foreign resident, would readily supply desirable facts in oral communication, from whom nothing is to be hoped in the way of correspondence.

But all such inquiries, when made, except from people who were actually engaged in work upon the Arabic Bible, have, at most, resulted in the discovery of some extraneous incident, or in putting me on the scent of some fact for which I had to go again to headquarters. Different persons (innocently, of course) have given different accounts of the same matter. I have had abundant occasion to see that the history of the production of the American Arabic Bible has never been much studied or much known, even in Beirût; and that there was little use in taking a current story without sifting it to the bottom. Many an inquiry, also, both oral and written, has

been answered by a reference to this or that printed book; which latter has generally proved, on examination, to contain no more explicit or particular information than was suitable for the ordinary readers of the popular publications of the religious and benevolent societies. Besides, I have found many mistakes in the popular publications.

When in Beirût, I inspected the working library of the translators (gathered through the knowledge and efforts of Dr. Eli Smith), besides a specimen selection of the correspondence had by Dr. Van Dyck with various scholars during the progress of the translation. This specimen correspondence included a great variety of documents, in various languages, of various grades of value, and was quite a rare and curious collection. These—and the whole mission library, in fact—are now deposited in the library of the theological seminary of the Syrian Protestant College. They were, when I was there, in the Mission Rooms at the building of the American Press.

The records of the Mission and of the American Press give dates of certain votes, and of the presentation to the mission of this or that edition of the Bible or of some part thereof; and the papers and records of the American Press would probably enable one to give statistics of the number and kind of the editions issued. But of the real internal history of the production of this Bible, not much is to be learned from such sources. Official accounts of work of the sort generally steer clear of the internal history. The statement that at such a time it seemed proper to do such or such a work gives no hint of the toil, struggle, discussion, persuasion, that may have been necessary before that result was reached.

Many of my inquiries elsewhere, and results thus obtained, coincide exactly with Dr. Van Dyck's own account; and I therefore forbear to duplicate those portions. It seems best, moreover, to give Dr. Van Dyck's account first, and to add such supplementary matter as I have obtained from other quarters.

1. DR. VAN DYCK'S ACCOUNT.

"The earliest Arabic version of the Scriptures, as far as I know, is that made under John, Bishop of Seville, about 750 A. D., from the Vulgate. According to the Jesuit Mariana, the whole Bible was translated, but was never printed. A number of manuscript copies of it have been found in Syria, but it was never [generally] known in the East.

"Rabbi Saad Ghidgaon, commonly known as Saadias of the Babylonian School, translated the whole of the Old Testament from Hebrew into Arabic in the ninth century, for the use of the Arabic-speaking Jews, of whom there were several tribes or families in Arabia. The Pentateuch of this version was pub

lished at Constantinople in 1546, in Hebrew characters, then at Paris in 1645, in Arabic characters, and at London in 1657.

"An edition of an Arabic translation of the Samaritan Pentateuch was edited by Jnynboll, of Leyden, a few years before his death. . . . I had this version, among others, before me while making my translation. I now recall the name: 'Abu Said the Samaritan;' date unknown—between the tenth and thirteenth centuries. A few copies have been found in Syria.

"An unknown Jew of North Africa made an Arabic translation of the Pentateuch in the thirteenth century, which was printed in Europe in 1622.

"A translation of the prophetic books from the Septuagint by a Jew of Alexandria, in the tenth century—latter part—was printed at Paris, 1645, and at London, 1657.

"There are extant parts of the historical books translated from the Syriac in the thirteenth and fourteenth centuries. Some have been printed in Europe. We find occasional fragments of these in convents.

"The version of the Psalms used by the Papal Greeks is a translation from the LXX. by Abdallah Ibn el-Fadl, in the twelfth century; printed at Aleppo, 1706, and at London, 1725. Another version was printed at Genoa, 1516, and at Rome, 1614; and a third, from the Syriac apparently, was printed at Shuweir, Mt. Lebanon, in 1610.

"Little is known of Arabic versions of the New Testament. The Gospels seem to have been in Arabic since the seventh century, and the other books since the ninth and tenth. Several versions of parts of the New Testament are in existence; some from the Syriac, some from the Greek, and some from the Coptic. The Four Gospels were first printed at Rome in 1591, and the whole New Testament in Holland, 1616, and at Paris, 1645, and at London, 1657.

"In the early part of the seventeenth century, Sarkis er-Rizz, a Maronite bishop of Damascus, got permission from the pope to gather and compare copies of the Arabic Scriptures, and make a new version; and he began the work in 1620, reducing all to the Vulgate: i. e., taking the version printed at Rome, and comparing with other Arabic versions and the Greek, but giving the preference to the Latin in most cases, as is evident from the version itself. This version was printed at Rome (about 1671), in three folio volumes, with the Apocrypha. It was (without the Apocrypha) adopted by the British and Foreign Bible Society, and printed by them, and circulated in the East by all missionaries, until the new version was made.

"It is said that the Sultan Muhammad II. ordered a translation of the Old Testament to be made from the Greek into the Arabic, but it is not known whether the work was ever executed. Probably not, or some trace of it would have been found.

"Between 1840 and 1850, Fares es-Shidiak and Professor Lee, under the auspices of the Church Propagation Society, made a

version of the Scriptures in Arabic. In this the mistakes of King James's English version are copied. It seems that Shidiak translated from the English, and Prof. Lee was supposed to reduce it to agreement with the Hebrew. This version never came into use. It was printed between 1851 and 1857 at London.

"As far back as 1837, the mission of the A. B. C. F. M. in Syria was considering the idea of making a new Arabic version of the Scriptures. The means for printing it when made were defective; and Dr. Eli Smith began his labors on Arabic type mostly with the printing of the Bible in view. His punches and matrices and fonts of type were ready by 1843, but ill-health and domestic affliction prevented his actually beginning the work till 1848, when he commenced, with the help of Muallim Butrus el-Bistani, a good Syriac scholar, who first studied Hebrew with Dr. Smith. He made the first draught, and Dr. Smith carefully reviewed and compared it with the original. As soon as a form was ready, it was put into type, and a copy sent to each missionary in the entire Arabic field, and also to any other Arabic scholars near enough at hand. These proofs, with any suggestions, emendations, corrections, or objections, were sent back to Dr. Smith, who carefully reviewed each, and adopted what he thought proper.

"Having begun on the Old Testament, and proceeded but a little way, Dr. Smith thought best to leave the Old Testament and proceed with the New Testament. He left a basis of the entire New Testament, but nothing was put in type. Dr. Smith adopted no known text of the Greek, but selected from Tischendorf, Lachmann, Tregelles, and Alford, as he thought fit. He had gone on far with the New Testament when Alford was published; and he stopped until he could go back and compare what he had done with Alford. On his death-bed, he said he 'would be responsible only for what had been printed:' viz., Genesis, and Exodus with the exception of the last chapter. I edited the last chapter of Exodus after he died.

"Dr. Smith died in 1857, January; but for the last year or more of his life he was able to do nothing at the translation. In the fall of the same year, I removed to Beirût [from Sidon], and assumed the care of the Press, and continued the translation of the Scriptures. It was then found out that Dr. Smith had followed no [one] Greek text of the New Testament, and this the Bible Society could not allow; wherefore the whole New Testament had to be done over. I was directed to begin on it, and to finish it before turning to the Old Testament. I followed the Received Text, with permission from the Bible Society to put in as many various readings in the foot-notes as seemed desirable, especially where the text differed from the Syriac or any known version in Arabic; and I availed myself largely of this permission.

"I followed the same plan as Dr. Smith, in sending out proofs, and re-reading and comparing all that were returned to me.

Some of the more difficult parts of the Old and New Testaments were kept in type for several months, till I could get the criticisms of Rödiger and Fleischer, from Halle and Leipzig. I have still their criticisms on the Song of Deborah and other difficult passages. The translation was finished August 23, 1864; and the printing of the first edition, 29 March, 1865. The New Testament had been finished and printed in 1860. Thirty copies of every form were struck off and distributed as above mentioned, and thus the work became the result of the labor of a large number of scholars. As Arabic scholars, Dr. Smith associated with him Sheikh Nasif el-Yazigi and M[uallim] B[utrus el-] Bistani, both Christians. I had with me Sheikh Yusuf el-Astr, a Muslim, and a graduate of the college of the great Mosque of El-Azhar in Cairo. I preferred a Muslim to a Christian, as coming to the work with no preconceived ideas of what a passage ought to mean, and as being more extensively read in Arabic.

"The Jesuits have issued a translation, made by them with the assistance of Ibrahim el-Yazigi, son of Dr. Smith's former assistant, and printed in three large octavo volumes. It is a fair translation generally, and only differs in very slight particulars from mine (so far as I have traced it)—and that only for the sake of differing from the Protestant Version.

"The first printed of the New Version was the New Testament, 12mo, reference. That was followed by the entire Bible, 8vo, reference; then 12mo voweled New Testament, and 16mo New Testament without vowels. I then went to New York, and in the Bible House got out electrotypes plates of a plain Bible, 8vo. These plates are still in use, and show very little wear. I am now at work reviewing them for correcting such little breakages as may have taken place in printing so many editions from them.

"After two years, I returned to Beirût with Mr. S. Hallock, and we made here electrotypes plates of four sizes of the entire Bible, one voweled entire; three sizes of the New Testament, one voweled; and one set of voweled Psalms, 12mo: in all, between 10,000 and 11,000 plates. Some of these were made after I left the Press, and by oversight of proof-reader were not compared with the standard copy which I had left there for that purpose. By this means some slight discrepancies between the editions have crept in; and I am now re-reading proofs of all the plates, to reduce all to the same reading, and to correct any errors of broken letters or vowel-points which may have occurred. The British and Foreign Bible Society have also electrotyped two editions of the New Version (entire Bible), and several parts of the Scriptures."

To Dr. Van Dyck's account some few things may be added.*

During the preparation of the plates in New York, sundry minor revisions in the translation were made, such as in the renderings of the words for *hades* and *gehenna* in the New Testament. These may be seen by comparing the former with the later editions.

The first edition of the whole Bible shows plainly where Dr. Smith's printing closed and Dr. Van Dyck's began, by the arrangement of the sheets. The last chapter of Exodus, except the title (which is on the preceding leaf), occupies one leaf by itself.

The Butrus el-Bistani mentioned by Dr. Van Dyck is the same who compiled the *Mohut el-Mohit*, which is for the Arabic language what Webster's or Worcester's dictionary is for the English. He also wrote the *Miftah*, or 'Key,' an Arabic grammar which is in common use, and highly esteemed by every one. At his death, which occurred quite recently, he was engaged in compiling an Encyclopædia in Arabic, of which several large 8vo volumes were already issued; but I do not know how far down the alphabet he had reached. He also edited three periodicals, a daily, a weekly, and a monthly. He spoke English well, had a flourishing school, and was an esteemed and respected citizen of Beirût.

Fares es-Shidiak was the author of the common Arabic grammar that goes by the name of "Faris' Arabic Grammar," published by Quaritch. He was a brother of Assaad es-Shidiak, who was famous as a martyr among the Protestants, and as a heretic among the Lebanon Maronites. (He was imprisoned for his faith by the officials of the Lebanon native Christians, and never let out alive. Stories differed greatly as to his actual fate. His jailors declared that he fell sick and died, but others told a very different story. Many a native told me the story as he believed it; and they all agreed that he had been either starved or murdered.)

The Sheikh Nasîf el Yazigy, who assisted Dr. Eli Smith, was the author of several books published by the American Press at Beirût; none of them, perhaps, more noted than his commentary on the Arabic grammar of Ibn Akîl. His poems are still for sale at the Press.

It will be observed that in general Dr. Van Dyck's account of former Arabic versions, though brief, is more complete than

* At the reading of this paper were exhibited copies of the *editio princeps* of the N. T., 12mo, the second, 16mo; the first pocket Arabic N. T. (the copy exhibited having been printed from movable types, before the plates were made); the *editio princeps* of the entire Bible, and a 12mo reference Bible. Prof. Edwin R. Lewis, M.D., then lately returned from Beirût, passed round a fine cabinet photograph of Dr. Van Dyck.

those found in easily accessible works; but it is scarcely within the scope of this paper to supplement it by a fuller bibliographical list; especially, as the issues of which he makes no mention were little more than later repetitions. The technical student will easily recognize the works which Dr. Van Dyck mentions so briefly. Perhaps it should be mentioned that the Arabic Pentateuch was published in quarto at Leyden in 1622; and that the publications referred to as "Paris, 1645" and "London, 1657" are in, or part of, the Paris Polyglott and the London (Walton's) Polyglott, respectively. Also, that the Arabic Gospels published at Rome in 1591 appeared in two forms: one Arabic, with interlinear Latin, illustrated with numerous elegant engravings, and probably issued in 1590; while the other, which answers more exactly to Dr. Van Dyck's description, lacked the interlinear version, and appeared in 1591.

The version of the Psalms printed at Genoa in the year 1516 is the famous Octuple Genoa Psalter, in Hebrew, Greek, Latin, and Chaldee, with a Latin translation of each, and the Vulgate, in parallel columns, and "Scholia" along the margins where possible. It is believed to be the second printed book in which Arabic type was used. It is best known in America for its famous note on the nineteenth Psalm, recording certain discoveries of Christopher Columbus not easily met with elsewhere.

From various sources I have learned that the New Testament translation of Dr. Eli Smith was actually not used by Dr. Van Dyck: principally, I understand, because its following an eclectic text would make it at least a little confusing to one who was under orders to follow the Greek *textus receptus*. But I also heard, and am inclined to believe, that the manuscript was burned (I never could learn by whom), and that the few printed sheets or proofs were destroyed. At all events, Dr. Smith's translation of the New Testament was not adopted (or, we may say, it was rejected) by the Bible Society, on account of its underlying text; and I could find no trace of the manuscript copy in Beirut. Nothing would be more natural, in view of the ideas that then prevailed respecting the New Testament text, than for some one to destroy it in holy horror, or as a well-intended but misguided work; for Dr. Smith was much ahead of his times, though apparently not a New Testament critic. I am inclined to think, on the whole, that it was destroyed as if useless, with tacit acquiescence of all concerned, as one would destroy a first draught after a fair copy was produced.

Here I may say that Dr. Van Dyck informed me orally that the particular variety of the *textus receptus* which he used, by direction, was that of Mill: I think, in some of its English

reprints. (Of course the professed reprints vary very much. The Oxford edition of 1836, with its repetitions, is almost the only one that is accurate—correcting Mill's misprints.)

Dr. Smith's work, to judge from the little that is left (Genesis, and Exodus all but the last chapter), is an exceedingly nice piece of work as a translation, and shows, as its strongest mark, the effect of file and finish. His chief difficulty as a translator, as I have been told by those who knew about his habits of work, was in deciding between a number of synonyms in rendering a word. Some of the missionaries who believe in rapid work have said to me that he was therein a prey to indecision; but to that I cannot agree. His work shows abundant discrimination and positiveness. But his (unfinished) Old Testament manuscript, as I have been told by those who saw it, often had a column of synonyms six or seven deep and high, above and below nearly every important word in the line.

To Dr. Eli Smith, however, belong especially two, if not three, uncommon deserts of praise. I pass by the bringing of a printing press to Beirût in 1840, which some say was due entirely to him, while others contradict. A press and printing establishment of the A. B. C. F. M. were already in operation at Smyrna; and doubtless it required some effort on the part of the more sensible and active missionaries to overcome the home prejudice, and show them that a press for a Greek population, with an Armenian and Turkish mixture, could not supply the wants of an Arabic-speaking people, the better part of a thousand miles away.

I pass by, too, the question whether, as some who ought to know allege, Dr. Smith was the first to assert, and the one finally to maintain, that a new Arabic translation of the Bible was indispensable, and that the success of American missions and the spread of the truth demanded the work. (In those days the American Bible Society innocently circulated De Sacy's French Bible, and other versions with additions not altogether countenanced now; and the missionaries generally were not eminent above their brethren at home in textual knowledge.) But I have heard repeated, and I can scarcely help believing, as the result of all I know, that it is fact; and that Dr. Eli Smith had a battle to fight, both at home and abroad (as Dr. Schauffler had abroad, at least, for his Turkish translation), for the nascent idea and the future existence of the new Arabic translation. But in all such matters, the final result is the act, if not the work, of the mission and the home Board; and the latter has never been willing to yield its glory, nor too ready to admit that it has been taught by its servants abroad. The records of the councils of war are usually withheld, even if individual merit suffer obscurity thereby.

But for the collecting of such books as were necessary in order even moderately to furnish the Bible translator, it is the universal testimony that the work was planned and executed by Dr. Smith—except so far as continued after his death. I do not refer to the Arabic books, for in that respect Dr. Van Dyck's gatherings were much superior; but to the critical and linguistic apparatus, such as are needed and appreciated in the better libraries of Europe and America, but are scarcely valued, or even understood, by the average missionary or clergyman at home. Such a collection, and yet quite moderate in extent, was brought together chiefly by the influence and efforts of Dr. Smith; though how he justified it as a necessity to those who could not see the use of such costly tools of trade, is one of the questions which had better remain unasked. The simplest expression of the fact is that Dr. Smith is the father and original cause of that fostering of Christian learning which has been so conspicuous in the progress of the Syrian mission. Here, too, it should be said that, whatever may be decided as to the bringing of the first American printing-press to Beirût, Dr. Smith was the hand and spirit of the work of the "American Press" as long as he lived.

The other service of Dr. Smith, to which reference was made above, was his bringing into existence the beautiful style of Arabic type in which the Bibles are printed at Beirût, and which is now preferred all over the world—with only the one exception that in Arabic journalism, and in other matters which demand rapid printing and easy type-setting, the ornamental ligatures are more and more being laid aside.

The history of these types is something like this: In Constantinople, once, between the years 1830 and 1840, Dr. Smith fell upon a set of specimens of Arabic calligraphy, in letters from an inch to an inch and a quarter in size. He secured them, and used them as his models for drawing larger ones, two and a quarter inches in size. He made a copy, as perfect as possible, of every letter, with all the variations; and these he used as (enlarged) patterns for the punch-cutters. In Leipzig he had the punches and matrices made, but he came back from Germany to Beirût, because the work in Germany was taking too much time. Mr. Homan Hallock, the director of the A. B. C. F. M.'s printing establishment in Smyrna, undertook to cut the punches; and he went to Boston or near there, and there finished the work.

The original calligraphic models which Dr. Smith purchased in Constantinople have been lost (a story says that they were stolen at his death), but his own outline drawings of them are believed to be in existence. Mr. Homan Hallock had a set of them; and of these the Bible Society had copies made by a

draughtsman. One set of these last is said to be in the Bible House at New York, another in the rooms of the A. B. C. F. M. at Boston, and another in Beirût.

Dr. Smith had three sizes of the type made; a first, second, and third size; now numbered, respectively, the first, second, and third font. After his death, Mr. Hallock made another, No. 4; also a set larger than No. 1, called "small caption." Also, from 1864-1867, large capitals, for various display purposes, were made at the expense of the Bible Society.

The selection of Dr. Van Dyck to succeed Dr. Smith was as inevitable and necessary as it was happy. He had been Dr. Smith's favorite scholar, and the only writer in Arabic whose works were suffered to pass into or out of the American Press without Dr. Smith's personal corrections. Dr. Van Dyck had already published a number of works in Arabic, which are standards to this day among the natives; amongst them, works on algebra, geometry, trigonometry, astronomy, and Arabic prosody—in which, of all things, a native Arabic speaker is the last to give credit to a foreigner. As a native poet told me, "Dr. Van Dyck had Arabic at his tongue's and fingers' ends" before he began to translate the Bible. But among the natives, no foreigners seem to have anything like the repute of these two Bible translators for Arabic scholarship. Of the Bible itself there is little need to speak further here. Its circulation and success among the natives are enormous. The variety of styles in which it is issued, and of the editions, and the numbers of each, can best be seen by consulting the lists and reports of the American and the British Societies, and the book-catalogues of the American Press at Beirût, for the last twenty years. The estimate of the Bible in the native mind may perhaps best be gathered from some cross remarks made by two natives in my hearing. One praised the elegance and excellence of the work, and its fine Arabic, and remarked that it was a wonder that Dr. Van Dyck could translate like that. The other replied "A wonder? He couldn't translate it in any other way!" I should add that our English Bible was their only standard by which to judge of its correctness.

From Edward Van Dyck, now in Egypt, second son of Dr. Van Dyck, I learned many minor circumstances which I can hardly detail here. Edward, himself "to the manner born" in Arabic, generally copied the sheets of the translation for the press, in large hand, after his father had corrected the proof from the criticisms of scholars to whom duplicates had been sent; which large-hand copy his father again carefully corrected; and it was then finally ready for the press. Edward also assisted at putting the references into shape for the Old Testament part of the reference editions.

He also gave me an oral account of events on the day of his father's finishing the translation (August 23, 1864), of which I have not a full memorandum. His father remained at work long after the hour for going to dinner—a rarity for his regular habit then—while Edward was waiting below, and busying himself as one who waits. All at once he heard his father's step upon the balcony, and, all very quietly: "Edward, it is finished. Thank God! What a load is off me! I never thought I was going to live to finish this work."

And they went home to dinner, leaving the last words of Malachi in Arabic, just finished, behind them.

Since the above article was printed, a note has been received from the author, as follows:

The report that the manuscript translation of Dr. Smith was destroyed, and not used by Dr. Van Dyck, is now contradicted, and seems likely to be proved untrue; and an early opportunity will be taken to publish the matter correctly, as soon as a complete statement on that point arrives from Dr. Van Dyck. It is the belief of those in charge of the mission archives that all Dr. Smith's manuscripts, of all the work he did, are preserved in tin boxes in the library of the mission. The present aspect of the matter is that the story of the destruction of his manuscript translation of the New Testament rests upon the fact that all that was printed of the New Testament under his direction, viz. Matthew i. to end of xvi., was destroyed, for the reason that it did not follow the *textus receptus*. It may be added that some valuable additional reports on the subject of the Arabic Bible by Dr. Smith have recently come to my knowledge, which throw light on the subject, and deserve to be printed in full.

ARTICLE IX.

ON A MANUSCRIPT SYRIAC LECTIONARY.

BY PROF. ISAAC H. HALL,
OF NEW YORK CITY.

Presented to the Society October 28th, 1880.

THIS manuscript was given me in 1877, by Dr. C. V. A. Van Dyck of Beirût, the well-known translator of the Bible into Arabic, who had obtained it a number of years before from the papal Jacobite monastery in Damascus. For a Syriac manuscript, its contents are not at all common. They consist, first, of an Evangelistarium or Lectionary: that is, the ordinary Gospel lessons for the fasts, feasts, Sundays, and Saturdays of the ecclesiastical year, arranged after the ancient Greek order, and not at all like the Syrian; and second, of a Menology, or table of lessons for the saints' days or feasts, for every day in the civil year, according (as the manuscript itself says) to the Greek arrangement or *taxis*.

Externally, the manuscript appears to be in the original binding: thick wooden boards covered with leather, the latter browned with tanning and age. On one side are the marks of five circular, scallop-edged, metallic ornaments, arranged in oblong quincunx, each of which is $\frac{5}{8}$ inch in diameter, and was once fastened by a central nail. There are also marks of two clasps, each of which had been attached by leather strips (thrust through three holes in the cover), instead of nails. On the other side of the cover are the marks of four large metallic ornaments, each two inches in diameter, and each originally fastened by four nails. In the center was also a Maltese cross, about three inches in extent each way. On the edge of this, the right hand cover, still remain the two stout brass pins on which the clasps caught, projecting $\frac{3}{4}$ of an inch. The whole book is $10 \times 7 \times 1\frac{1}{2}$ inches in dimension; and each cover is $\frac{1}{2}$

inch thick. On one side of the cover are scribbled some Arabic numerical computations; also the (Italian or) Latin words, in rather modern writing, *Santa Maria Curissima*; and also four words in Syriac, of which two are faded and illegible; the other two reading 'Our Father who art in heaven.'

The manuscript consists of 95 leaves of ancient, tough cotton paper (*charta Damascena*), glazed after the fashion of the better Syriac and Arabic paper MSS., and somewhat worm-eaten, especially at the two ends. Many leaves show an ancient mending, either on the margin within, to keep them in place, or on the outer margins, to repair a break. The manuscript consisted originally of 13 quires of 4 folios or 8 leaves each (quaternions); except that two of them had 5 folios or 10 leaves (*quiniones*). Each quire has its number, or signature, at beginning and end, in the lower margin, with some slight ornamentation, after the Syrian fashion. Besides this, a much later hand has repeated this numbering in Arabic words (as 'quire eight,' or the like); writing, however, in a style older than the current Arabic script of to-day.

More definitely, the following statement shows how much of the original manuscript is now present:

Quire 1 had 4 folios or 8 leaves; leaves 1, 2, 3, and 6 are missing.

Quires 2-7 had each 4 folios; all still complete.

Quire 8 had 5 folios or 10 leaves; leaves 6 and 7 are missing.

Quire 9 had 5 folios, and is complete.

Quire 10 had 4 folios, and is complete.

Quire 11 had 4 folios; leaves 1, 2, 7, 8, or the two outer folios, are missing.

Quire 12 had 4 folios; leaf 1 is missing.

Quire 13 had 4 folios; leaves 7 and 8 are missing.

The manuscript therefore consisted originally of 108 leaves, of which 13 are now missing. In nearly every case where a leaf is gone, a little stump is left, besides the other plain evidences. The first and last leaves now present are somewhat worn by rather recent friction against the (now) bare wood of the cover. But neither this nor the worm-holes interfere seriously with the reading. The only difficult portions are those where water has damaged and blurred the upper half of the first twenty leaves, with a few smaller spots elsewhere. In a few places, scarcely half a dozen lines in all, a second hand has retraced the letters where the reading had been destroyed along with the glazing.

The writing is in two columns to the page, 34 lines to the column. At the end of each principal division of the subject-matter is usually an ornament, occupying the space of from one to four lines; but otherwise there is scarcely a break. In one,

or perhaps two places, a space left for a rubric has remained unfilled; and sometimes a blank is left in a line when the end of the paragraph is reached before that of the line. The height of the columns is 7 to $7\frac{1}{2}$ inches, the width of the inner column $2\frac{1}{2}$ inches, of the outer $2\frac{1}{2}$, though the latter sometimes expands to $2\frac{3}{4}$. The width of the space between the columns is $\frac{1}{8}$ of an inch.

The style of writing is a mixture of the later Estrangela with the Jacobite, or that current in the West; but it is by no means of a very recent pattern. The letters *shin*, *beth*, *gomal*, *qoph*, *mim* keep generally the most ancient type, with a slight leaning to the Jacobite; while the *dolath* and *rish* incline more to the Nestorian. Ornamental initials generally conform to the old Estrangela, except the *olaph*, which occurs in the greatest variety of shapes. In the text it occurs in both the Estrangela form and another which is really ancient, though commonly esteemed later; but never in the marked Nestorian form. In one or two places where *tau* appears to be written by mistake (but this is not certain) for *olaph*, this MS. may have had an *olaph* of the Nestorian form to copy from. On the whole, the character is such as to be read with ease by one familiar with the Estrangela, but not without a deal of study by one who knows only the common printed varieties.

There may have been two scribes; for the handwriting grows bolder in the latter portions, and becomes free from a few constant clerical errors of the former part. For example, in the first portion, the word for 'Friday' (~~2A5000~~) in the lesson notes has constantly a *pe* in place of its *beth*; but this is corrected in the later portion. In both portions, *lomad olaph* is combined in the ancient style; but in the latter portion, when used to express the numeral 31, it is sometimes written cross-wise, in the fashion which is common enough in Arabic, but less so in Syriac.

In both the two divisions of the MS., lectionary and menology, an auxiliary lesson note occurs here and there in poor Arabic, as if written by a foreigner; but these are only fourteen in all. They are written in the older *Neskhi*, but are not so early as the transition from Cufic. Some of them appear to mark the name of a lesson after the Syrian order. In one place direct mention is made of a coincidence with the Syrian lesson for a saint's day.

The contents of the manuscript, it will be observed, appear to throw back the date nearly or quite to the 12th century. On the other hand, the paper material and the style of writing seem barely to admit the 12th, but to point to the 13th, or possibly to the 14th. Some time in the early portion of the 13th century, therefore, seems the most probable date.

In the rendering of ecclesiastical terms, personal epithets, and the like, the genius of the MS. inclines to the Syriac rather than to the Greek; though here and there a Greek genitive seems to be transferred. Such words as Chrysostom, Theologus, Stylites, Theotokos, are translated into their Syriac equivalents; generally employing a phrase to render a single word. The transliteration of foreign words, also, with all the other small peculiarities which give any clue to the linguistic genius of the codex, show that it does not come very near to the times, or else to the people, in which Greek was understood by the Syrian ecclesiastics. It is, so to speak, at the opposite pole from the Syriac and Armenian palimpsest described by Tischendorf on p. 13 of his *Anecdote Sacra et Profana*. In spelling proper names, *qoph* sometimes replaces χ as well as x ; *yud* stands for either υ , ϵ , or η ; and *waw* for o , ω , or u , as well as sometimes, apparently, for the Roman o and u .

The Lectionary portion agrees almost precisely with the Greek lessons as given in Scrivener's Plain Introduction, 2d edition, pp. 68-79, and in Smith's Dictionary of Christian Antiquities, pp. 955 ff., except that it commonly gives only the lessons for Saturdays and Sundays, with the more important fast and feast days. Week-day lessons are given from Easter to Pentecost, and through the Holy Week; as well as in some other places to be noted further on. The Menology gives the saint's day lessons for every day in the year; and agrees, rather oftener than it disagrees, with that given in Scrivener's Plain Introduction, 2d edition, pp. 81 ff., and with his extracts from the Jerusalem Syriac on pp. 291, 292.

In both Lectionary and Menology the scribe has frequently committed the error of writing the abbreviation for 'pentecost' in place of that for 'passover.' Here and there, too, he has given a wrong name for the Evangelist from whom a lesson is taken; but the correction of such errors is obvious. In the Menology the scribe has often put the sign of the plural over words where it does not belong. This is most frequent over the word for 'chief priest' (I do not forget that plural points are sometimes employed with the second element of the compound noun). In referring to places where a lesson is written in full, the scribe has left doubtful, in a very few instances, whether the lesson referred to is that of a Saturday or the next Sunday; but the defect is in general easy to be supplied.

I have collated the Scripture readings with the text of Leusden and Schaaf (ed. of 1708), and compared with other editions. The grammatically diacritic points in the MS. are few, and rarely cause a real variant. They are confined chiefly to the signs of the plural and those which mark the different offices of the pronoun. The collation shows that this MS., though full

of slight clerical errors, has a text more nearly like the bulk of Syriac MSS. than like the "edited" editions, especially those in England, which have been made to conform so often to the common Greek text. In Luke xxiv. 32 it reads 'heavy' for 'burning;' and in general it follows Peshitto peculiarities.

The church lessons themselves, after the notes, most commonly begin with an introductory phrase: such as, 'At that time,' 'Our Lord said to the Jews,' or 'Our Lord said to his disciples.' Sometimes they transpose the opening words, or add a word or more from the context, in order to make the meaning clear. Thus, it often has 'Jesus said,' or 'Jesus came,' for 'he said,' or 'he came.' Cases where the lesson commences in the *ipsissima verba* of the Gospel are the uncommon exception.

The rubricated portions of the notes are mingled with black, apparently with no other rule than to aid the eye. Abbreviations are very common in the lesson notes; but not so in the Scripture text; and then they are of the most obvious sort.

As the manuscript now is, it commences in the midst of the lesson for Tuesday after Easter. The whole lesson, according to the Greek order, is Luke xxiv. 12-35. The MS. begins in verse 18, and has the rest of the lesson. At the beginning, therefore, the codex lacks the title, with the lessons for Easter Sunday and Monday. The following is the lesson list. In translating the lesson notes, English names are given for the days of the week. Lessons, which in the MS. are denoted by reference merely, have their contents here indicated in brackets. Those which are written out in full in the MS. have their contents here indicated without brackets. In translating, an effort has been made to show the abbreviations, except in the names of the days of the week, which would be almost impossible.


LECTIONARY.

- Fol. 1. a. 1. Luke xxiv. 18-35. (Fragment of lesson for Tuesday after Easter, which is Luke xxiv. 12-35.)
- Fol. 1. b. 1. Wednesday of Rest. Gospel of priestly ministration, from John: John i. 35-51. (Between vv. 42 and 43 is inserted a rubricated word now all obliterated except the first and last letters, *lomad* and *tau*.)
- Fol. 2. a. 1. Thursday of Rest; called Feast of the apostles James and John. Gospel, from John: John iii. 1-15.
- Fol. 2. a. 2. Friday of Rest. Gospel, from John: John ii. 12-22.
- Fol. 2. b. 1. Saturday of Rest. Gospel, from John: John iii. 22-28. (The lesson extended to vs. 33, but it here breaks off with the end of the leaf, the next leaf being gone. The next leaf now present commences with)
- Fol. 3. a. 1. John iii. 16-21. (In lesson for Tuesday of second week after passover.)

- Fol. 3. a. 1. Wednesday 2. Gospel, from John: John v. 17-24.
 Fol. 3. a. 2. Thursday 2 after passover. Gospel, from John: John v. 24-30.
 Fol. 3. b. 2. Friday 2 after passover. Gospel, from John: John v. 30-vi. 2.
 Fol. 4. a. 1. Saturday 2 after passover. Gospel, from John: John vi. 14-27.
- Fol. 4. b. 1. Sunday 3. Commemoration of Joseph of Arimathea. Gospel of matins, 4 of Resurrection [Luke xxiv. 1-12]. Gospel of priestly ministration, from Mark: Mark xv. 43-xvi. 8. (At vs. 46, however, is the note, in Syriac:) Part (and then in Arabic:) shall be read the second Sunday of the Resurrection.*
- Fol. 5. a. 1. Monday 3 after passover. Gospel, from John: John iv. 46-54.
 Fol. 5. a. 2. Tuesday 3 after pass. Gospel, from John: John vi. 27-33.
 Fol. 5. b. 1. Wednesday 3 after passover. Gospel, from John: John vi. 35-39.
 Fol. 5. b. 2. Thursday 3 after pass. Gospel, from John: John vi. 40-44.
 Friday 3 after pass. Gospel, from John: John vi. 47-54.
 Fol. 6. a. 1. Saturday 3 after pass. Gospel, from John. (Note in Arabic:) And this Gospel shall be read for [the feast of] all the martyrs. John xv. 16-xvi. 2.
- Fol. 6. b. 1. Sunday 4. Of the paralytic whom our Lord healed. Gospel of matins, from Luke. See Gospel 5 of the Resurrection [Luke xxiv. 12-35]. Gospel of priestly ministration, from John: John v. 1-15.
- Fol. 7. a. 1. Monday 4. Gospel, from John: John vi. 55-59.
 Fol. 7. b. 1. Tuesday 4 after pass. Gospel, from John: John vii. 1-13.
 Fol. 7. b. 2. Wednesday 4 after pass.; and it is half way to Pentecost. Of matins, Psalm in liturgy 4: God standeth in the congregation of the angels [Psa. lxxxii. 1]. Section (or, Verse): How long will ye judge unjustly and [accept] the persons of the wicked [Psa. lxxxii. 2]. Gospel of matins, from John: At that time when Jesus walked in Galilee, to, For fear of the Jews [John vii. 1-13]. It was written [in the lesson] for yesterday. Gospel of priestly ministration, from John: John vii. 14-30.
- Fol. 8. b. 1. Thursday 4 after passover. Gospel, from John: John viii. 12-20.

* This Arabic note seems to mark a lesson of the Syrian order. The rest of the lesson, Mark xvi. 1-8, is, as the note seems to intend to state, the second of the eleven Resurrection Gospels.

- Fol. 8. b. 2. Friday 4 after pass. Gospel, from John: John viii. 21-30.
- Fol. 9. a. 1. Saturday 4 after pass. Gospel, from John: John viii. 31-42.
- Fol. 9. b. 1. Sunday 5, that is of the Samaritan woman. Gospel of matins, 1 of the Resurrection [Matt. xxviii. 16-20]. Gospel of priestly ministration, from John: John iv. 5-42.
- Fol. 10. b. 2. Monday 5 after pass. Gospel, from John: John viii. 42-51.
- Fol. 11. a. 1. Tuesday 5 of pente. [*error for after passover*]. Gospel from John: John viii. 51-59.
- Fol. 11. b. 1. Wednesday 5 of pente. [*error for after passover*]. Gospel, from John: John vi. 5-14.
- Fol. 11. b. 2. Thursday 5 of pente. [*error for after passover*]. Gospel, from John: John ix. 39-x. 9.
- Fol. 12. a. 1. Friday 5 of pente. [*error for after passover*]. Gospel, from John: John x. 17-28.
- Fol. 12. b. 1. Saturday 5 after pente. [*error for after passover*]. Gospel, from John: John x. 27-38.
- Fol. 12. b. 2. Sunday 6, of the blind man whose eyes our Lord opened. Gospel of matins, 8 of the Resurrection [John xx. 11-18]. Gospel of priestly ministration, from John: John ix. 1-38.
- Fol. 14. a. 1. Monday 6 after passover. Gospel, from John: John xi. 47-54.
- Fol. 14. a. 2. Tuesday 6 after passover.* Gospel, from John: John xii. 19-36.
- Fol. 14. b. 2. Wednesday 6 after pass. Gospel, from John: John xii. 36-47.
- Fol. 15. a. 2. Thursday 6 after passover. It is the feast of the ascension of our Lord in the body to heaven. Psalm before the Evangel of matins: God is gone up with a shout, and the Lord with the sound of a trumpet [Psa. xlvii. 5]. Section (or, Verse): O clap your hands, all ye peoples [Psa. xlvii. 1]. Gospel of matins, from Mark: And very early in the morning of the first day of the week [Mark xvi. 2]. See in [lesson for] Sunday 3 of the Resurrection [Mark xvi. 1-8]. And in the priestly ministration, from Luke: Luke xxiv. 36-53.
- Fol. 15. b. 2. Friday 6 after pass. Gospel, from John: John xiv. 1-11.
- Fol. 16. a. 1. Saturday 6 after passover. Gospel, from John: John xiv. 10-21.
- Fol. 16. a. 2. Sunday 7 after passover. Commemoration of the fathers [i. e., the 318 of Nicæa]. Gospel of matins, from John, 10 of the Resurrection [John xxi. 1-14].

* Before the word 'passover,'  is written by mistake.

- Fol. 16. a. 2. And in priestly ministration, Gospel from John : John xvii. 1-13.
- Fol. 16. b. 2. Monday 7 after passover. Gospel, from John : John xiv. 27-xv. 7.
- Fol. 17. a. 1. Tuesday 7 after pass. Gospel, from John : John xvi. 2-13.
- Fol. 17. b. 1. Wednesday 7 after passover. Gospel, from John : John xvi. 15-23.
- Fol. 17. b. 2. Thursday 7 after pass. Gospel, from John : John xvi. 23-33.
- Fol. 18. a. 2. Friday 7 after passover. Gospel, from John : John xvii. 18-28.
- Fol. 18. b. 1. Saturday 7 of pente.* Gospel, from John : John xxi. 14-25.
- Fol. 19. a. 1. Great Sunday of pente. At matins they have no custom to read the gospel; but if one will read, let him say the Psalm in liturgy 4: Thy spirit is good [Psa. cxliii. (cxlii.) 10]. Section (or, Verse): Hear my prayer, O Lord (Psa. ib. 1). Gospel of matins, from John : Then the same day at evening, to, Whosoever sins ye retain, they are retained [John xx. 19-23]. See in [lesson for] New Sunday.† Gospel of priestly ministration, from John : John vii. 37-52; viii. 12. (The *Pericope de Adultèra* is not in the Syriac versions.)
- Fol. 19. b. 2. Monday after pente. Gospel, from John [error for Matthew]: Matt. xviii. 10-20.
- Fol. 20. a. 1. Tuesday after pente. Gospel, from John [error for Matthew]: Matt. iv. 23-v. 13.
- Fol. 20. b. 1. Wednesday after pente. Gospel, from Matthew : Matt. v. 20-26.
- Fol. 20. b. 2. Thursday after pente. Gospel, from John [error for Matthew]: Matt. v. 27-32.
- Fol. 21. a. 1. Friday in W[EEK] after pente. Gospel, from Matthew : Matt. v. 33-42.
- Fol. 21. a. 2. Saturday after pente. Gospel, from Matthew : Matt. v. 43-48.
- Fol. 21. b. 1. Sunday 1 after Sunday of pente. Commemoration of all saints of the world (or, all saints from the beginning). Gospel, from Matthew : Matt. x. 32, 33, 37-39; xix. 27-30.
- Fol. 21. b. 2. Saturday 2 after pente. Gospel, from Matthew : Matt. vii. 1-8.
- Fol. 22. a. 1. Sunday 2 after pente. Gospel, from Matthew : Matt. iv. 18-23.

* "Pente." here is not an error. The meaning is, Saturday 7 after passover, which is the eve of pentecost. This is shown by citations of this lesson in the Menology.

† This note seems to mark a Syrian lesson. 'New Sunday' is a Syrian term for Low Sunday.

- Fol. 22. a. 2. Saturday 3 after pente. Gospel, from Matthew : Matt. vii. 24-viii. 4.
- Fol. 22. b. 1. Sunday 3 after pente. Gosp., from Matthew : Matt. vi. 22-33.
- Fol. 23. a. 1. Saturday 4 after pente. Gospel, from Matthew : Matt. viii. 14-23.
- Fol. 23. a. 2. Sunday 4 after pente. Gospel, from Matthew : Matt. viii. 5-13.
- Fol. 23. b. 1. Saturday 5 after pente. Gospel, from Matthew : Matt. ix. 9-13.
- Fol. 23. b. 2. Sunday 5 after pente. Gospel, from Matthew : Matt. viii. 28-ix. 1.
- Fol. 24. a. 1. Saturday 6 after pente. Gospel, from Matthew : Matt. ix. 18-26.
- Fol. 24. a. 2. Sunday 6 after pente. Gospel, from Matthew : Matt. ix. 1-8.
- Fol. 24. b. 1. Saturday 7 after pente. Gospel, from Matthew : Matt. x. 36-xi. 1.
- Fol. 24. b. 2. Sunday 7 after pente. Gospel, from Matthew : Matt. ix. 27-35.
- Fol. 25. a. 1. Saturday 8 after pente. Gospel, from Matthew : Matt. xii. 30-37.
- Fol. 25. a. 2. Sunday 8 after pente. Gospel, from Matthew : Matt. xiv. 14-22.
- Fol. 25. b. 1. Saturday 9 after pentecost. Gospel, from Matthew : Matt. xv. 32-39.
- Fol. 25. b. 2. Sunday 9 after pente. Gospel, from Matthew : Matt. xiv. 22-34.
- Fol. 26. a. 1. Saturday 10 after pente. Gospel, from Matthew : Matt. xvii. 24-xviii. 4.
- Fol. 26. b. 1. Sunday 10 after pente. Gospel, from Matthew : Matt. xvii. 14-23.
- Fol. 26. b. 2. Saturday 11 after pente. Gospel, from Matthew : Matt. xix. 3-12.
- Fol. 27. a. 1. Sunday 11 after pente. Gospel, from Matthew : Matt. xviii. 23-35.
- Fol. 27. b. 1. Saturday 12 after pente. Gospel, from Matthew : Matt. xx. 29-34.
- Sunday 12 after pente. Gospel, from Matthew : Matt. xix. 16-26.
- Fol. 28. a. 1. Saturday 13 after pente. Gospel, from Matthew : Matt. xxii. 15-22.
- Fol. 28. a. 2. Sunday 13 after pente. Gospel, from Matthew : Matt. xxi. 33-42.
- Fol. 28. b. 1. Saturday 14 after pente. Gospel, from Matthew : Matt. xxiii. 1-12.
- Fol. 28. b. 2. Sunday 14 after pente. Gospel, from Matthew : Matt. xxii. 2-14.
- Fol. 29. a. 2. Saturday 15 after pente. Gospel, from Matthew : Matt. xxiv. 1-13.

- Fol. 29. b. 1. Sunday 15 after pente. Gospel, from Matthew : *Matt.* xxii. 35-46.
- Fol. 29. b. 2. Saturday 16 after pente. Gospel, from Matthew : *Matt.* xxiv. 34-44.
- Fol. 30. a. 2. Sunday 16 after pente. Gospel, from Matthew : *Matt.* xxv. 14-29, with xi. 15 (or xiii. 43) added at the end.
- Fol. 30. b. 2. Saturday 17 after pente. Lesson for Euphemia. (Then, note in Arabic :) And it shall also be read for all holy women (or, female saints). Gospel, from Matthew : *Matt.* xxv. 1-13.
- Fol. 31. a. 1. Sunday 17 after pente. Gospel, from Matthew : *Matt.* xv. 21-28. (At the end of the lesson is added this note in Arabic :) Finished are the lessons for Sundays and Saturdays from Matthew the preacher of the gospel.
- Fol. 31. a. 2. Sunday 2 after the feast of the cross begins in the Gospel of Luke.
Saturday 2 after the feast of the cross; and it is the first Saturday that begins in the Gospel. Gospel, from Luke : *Luke* iv. 31-41.
- Fol. 31. b. 2. Sunday 1. Gospel, from Luke : *Luke* v. 1-11.
- Fol. 32. a. 2. Saturday 2. Gospel, from Luke : *Luke* v. 17-26.
- Fol. 32. b. 1. Sunday 2. Gospel, from Luke : *Luke* vi. 31-36.
- Fol. 32. b. 2. Saturday 3. Gospel, from Luke : *Luke* v. 27-32.
- Fol. 33. a. 1. Sunday 3. Gospel, from Luke : *Luke* vii. 11-16.
- Fol. 33. a. 2. Saturday 4. Gospel, from Luke : *Luke* vi. 1-10.
- Fol. 33. b. 1. Sunday 4. Gospel, from Luke : *Luke* viii. 5-15. (At the end of the lesson is added :) When he had said these things, he cried, Who hath ears to hear, let him hear.
- Fol. 34. a. 1. Saturday 5. Gospel, from Luke : *Luke* vii. 1-10.
- Fol. 34. a. 2. Sunday 5. Gospel, from Luke : xvi. 19-30 (or 31).* (Note in margin, in corrupt Arabic :) And thou shalt suppress it until thou read it six days before salutation (?) in Tishrîn 2 (or, it may be, simply, until thou read it before the sixth day of Tishrîn 2).
- Fol. 34. b. 2. Saturday 6. Gospel, from Luke : *Luke* viii. 16-21.
- Fol. 35. a. 1. Sunday 6. Gospel, from Luke : *Luke* viii. 26-39.
- Fol. 35. b. 1. Saturday 7, called, of the apostles. Gospel, from Luke : *Luke* ix. 1-6.
- Sunday 7. Gospel, from Luke : *Luke* viii. 41-56.
- Fol. 36. a. 2. Saturday 8. Gospel, from Luke : *Luke* ix. 37-43.
- Sunday 8. Gospel, from Luke. (Note in Arabic :) And it shall be read in the fifth Sunday of Lent : † *Luke* x. 25-37.
- Fol. 36. b. 2. Saturday 9, from Luke : *Luke* ix. 57-62.

* An error of the scribe (homoioteleuton) makes it doubtful whether the lesson ends with vs. 30 or vs. 31. The ordinary Greek lesson includes vs. 31.

† This Arabic note tells merely the place of this lesson in the Syrian order.

- Fol. 37. a. 1. Sunday 9. Gospel, from Luke: Luke xii. 16-21. (After the lesson is added :) And when he had said these things he cried and said, He that hath ears to hear, let him hear.
- Fol. 37. a. 2. Saturday 10, from Luke. (Note in very corrupt Arabic :) Shall be read for the apostles, the seventy, and for any one of the seventy (?) : Luke x. 16-21.
- Fol. 37. b. 1. Sunday 10. Gospel, from Luke: Luke xiii. 10-17.
- Fol. 37. b. 2. Saturday 11. Gospel, from Luke: Luke xii. 32-40.
- Fol. 38. a. 1. Sunday 11. Gospel, from Luke: Luke xiv. 16-24.
- Fol. 38. a. 2. Saturday 12. Gospel, from Luke: Luke xiii. 19-29.
- Fol. 38. b. 2. Sunday 12. Gospel, from Luke: Luke xvii. 12-19.
- Fol. 39. a. 1. Saturday 13. Gospel, from Luke: Luke xiv. 1-11.
- Fol. 39. a. 2. Sunday 13. Gospel, from Luke: Luke xviii. 18-27.
- Fol. 39. b. 1. Saturday 14. Gospel, from Luke: Luke xvi. 10-18.
- Fol. 40. a. 1. Sunday 14. Gospel, from Luke: Luke xviii. 35-43.
- Fol. 40. a. 2. Saturday 15. Gospel, from Luke: Luke xvii. 3-10.
- Fol. 40. b. 1. Sunday 15. Gospel, from Luke: Luke xix. 1-10.
- Fol. 40. b. 2. Saturday 16. Gospel, from Luke: Luke xviii. 1-8.
- Fol. 41. a. 1. Sunday 16. Gospel, from Luke: Luke xviii. 9-14.
- Fol. 41. a. 2. Saturday 17. Gospel, from Luke: Luke xx. 46-xxi. 4.
- Sunday 17. Lesson, from Matthew: At that time came Jesus to the regions of Tyre and Sidon. See Sunday 17, from Matthew [Matt. xv. 21-28].
- Fol. 41. b. 1. Saturday 18. Gospel, from Luke. Read whatever lesson is desired from the gospels of the Saturdays. But I say that this Saturday is that of the Prodigal Son. [The ordinary Greek Gospel for the Prodigal Son Saturday is Luke xv. 1-10.] Sunday 18, of the Prodigal Son [Septuagesima]. Gospel, from Luke: Luke xv. 11-32.
- Fol. 42. a. 1. Saturday of flesh [carnival]. Gospel, from Luke: Luke xxi. 8, 9, 25-27, 33-36.
- Fol. 42. b. 1. Sunday of flesh. Gospel, from Luke [error for Matthew]: Matt. xxv. 31-46.
- Fol. 43. a. 1. Saturday of cheese. [τῆς τυροφάγου]. Gospel, from Matthew: Matt. vi. 1-13.
- Fol. 43. a. 2. Sunday of cheese. Gospel, from Luke [error for Matthew]: Matt. vi. 14-21.
- Fol. 43. b. 1. The Monday that is the first day of the great fast (Lent). At vespers, Gospel, from Luke: Our Lord said, Take heed that ye be not deceived. Written, Saturday of Flesh. [Luke xxi. 8, 9, 25-27, 33-36.]
- Fol. 43. b. 2. First Tuesday in the great fast (Lent). At vespers, Gospel, from Matthew: Our Lord said, But take heed. Written, Saturday of cheese [Matt. vi. 1-13].
- Wednesday 1 in the great fast. At vespers, Gospel, from Mark: Mark xi. 22-26.
- Thursday 1 of the great fast. At vespers, Gospel, from Matthew: Matt. vii. 7-11.

- Fol. 44. a. 1. Friday 1 of the fast. At vespers, Gospel, from John: Our Lord said to his disciples, I am the true vine, to, Ye shall ask what ye will, and it shall be done unto you [John xv. 1-7]. Written, Monday of Week 7 after pente. [*error for passover*] [John xiv. 27-xv. 7].
- Saturday 1 of the fast. Commemoration of the martyr Theodorus. Gospel, from Mark: Mark ii. 23-iii. 5.
- Fol. 44. b. 1. Sunday 1 of the fast. Commemoration of Moses and of Aaron and of the rest. Gospel from John: At that time Jesus would go away to Galilee. Written Wednesday of the week of rest [John i. 35-51], latter portion.
- Saturday 2. Gospel, from Mark: Mark i. 35-44.
- Fol. 44. b. 2. Sunday 2 of the great fast. Gospel, from Mark: Mark ii. 1-12.
- Fol. 45. a. 1. Saturday 3 of the fast. Gospel, from Mark: Mark ii. 14-17.
- Fol. 45. a. 2. Sunday 3 of the great fast. Gospel, from Mark: Mark viii. 34-ix. 1.
- Fol. 45. b. 1. Saturday 4 of the fast. Gospel, from Mark: Mark vii. 31-37.
- Fol. 45. b. 2. Sunday 4 of the fast. Gospel, from Mark: Mark ix. 17-31.
- Fol. 46. a. 2. Saturday 5 of the fast. Gospel, from Mark: Mark viii. 27-31.
- Fol. 46. b. 1. Sunday 5 of the great fast. Gospel, from Mark: Mark x. 32-45.
- Fol. 47. a. 1. Saturday 6 of the great fast. Of Mar Lazarus. Gospel, from Mark [*error for John*]: John xi. 1-45.
- Fol. 48. a. 1. Sunday of Hosannas (Palm Sunday). Psalm before the evangel of matins, in liturgy 4: Out of the mouth of babes and sucklings thou hast ordained praise [Psa. viii. 2]. Section (or, Verse): O Lord our Lord, how excellent is thy name in all the earth [Psa. viii. 1]. Gospel of matins, from Matthew: Matt. xxi. 1-11, 15-17. [Fol. 48. b. 1.] Gospel of priestly ministration, from John: John xii. 1-18. [At end of vs. 11 is the note in Arabic:] And from here shall be read in the supplication [*λίτη*]. [Then again in Syriac, at the end of the lesson, Fol. 49. a. 2.] Gospel of the supplication, from Luke: Luke xix. 28-40.* Latter Gospel in the supplication, from Luke [*error for Mark*]: Mark xi. 1-11.†
- Fol. 49. b. 2. Monday of Passion. Gospel of matins, from Matthew: Matt. xxi. 18-43. [Fol. 50. b. 2.] Monday at vespers. Gospel, from Matthew: Matt. xxiv. 3-35.

* This is the lesson for the day after the Syrian order. It is not the usual one of the Greek.

† This is the latter portion of the regular Greek *λίτη* for the day.

- Fol. 51. b. 1. Tuesday of Passion, at matins. Gospel, from Matthew: Matt. xxii. 15-xxiv. 2. [Fol. 53. b. 1.] Tuesday of Passion, at vespers. Gospel, from Matthew: Matt. xxiv. 36-xxvi. 2.
- Fol. 55. b. 1. Wednesday of Passion. Gospel of matins, from John: John xii. 17-50. [Fol. 56. a. 2.] Wednesday in Passion Week, at vespers. Gospel, from Matthew: Matt. xxvi. 6-16.
- Fol. 56. b. 2. Thursday of secrets (*or*, mysteries), at matins. Gosp., from Luke: Luke xxii. 1-39. (Then the note in Syriac, Fol. 57. b. 1.): There belong to this Thursday of secrets (then in Arabic:) Evangel of the washing. Gospel, from John: John xiii. 1-8. [Here the lesson breaks off at the end of the leaf, as the next two leaves are missing. The lesson is part of the Syrian; viz. John xiii. 1-30, which included more than the Greek. The next leaf now present (Fol. 58) begins in the midst of a lesson, probably vespers of this Thursday after the Greek order. The fragmentary lesson is:] Matt. xxvi. 44-xxvii. 2.
- Fol. 59. a. 1. Gospel 1 of the twelve gospels of the night of Friday of Passion. (Then in Arabic:) And it is the Gospel of the commandment (*or*, *Mandata*, Maundy): John xiii. 31-xviii. 1. (At xiv. 15 [Fol. 59. b. 1] is an Arabic note in the margin:) From here shall be read at the adoration, first day of pentecost.* (And again just before the last clause of xiv. 31, in [Fol. 60. a. 1.] Arabic:) As far as here shall be read for the adoration.
- Fol. 62. b. 1. Gospel 2, from John: John xviii. 1-28.
- Fol. 63. b. 1. Gospel 3, from Matthew: Matt. xxvi. 57-75.
- Fol. 64. a. 1. Gospel 4, from John: John xviii. 28-xix. 16.
- Gospel 5, from Matthew: Matt. xxvii. 3-32.
- Fol. 65. b. 2. Gospel 6, from Mark: Mark xv. 16-32.
- Fol. 66. a. 2. Gospel 7, from Matthew: Matt. xxvii. 33-54.
- Fol. 66. b. 2. Gospel 8, from Luke: Luke xxiii. 32-49.
- Fol. 67. a. 2. Gospel 9, from John: John xix. 25-37.
- Fol. 67. b. 2. Gospel 10, from Mark: Mark xv. 43-47.
- Gospel 11, from John: John xix. 38-42.
- Fol. 68. a. 1. Gospel 12, from Matthew. (Note in Arabic:) And it shall also be read on Great Saturday. (Then in Syriac:) Great Saturday, at matins. Matt. xxvii. 62-66.
- Fol. 68. a. 2. There follows the gospel of the day time of Great Friday (Good Friday), at the sixth hour, gathered in

* These Arabic notes mark a Syrian lesson, which, however, is not quite coincident with that given here, as it extended from John xiv. 15 to xv. 7; or several verses beyond this one.

- Fol. 68. a. 2. congregation, to the church, and praying the prayers of the sixth hour; and after that, commencing according to the *taxis*, in regular succession; and reading the Gospel from Matthew: At that time, when Judas saw that he was condemned, to, Him they compelled to bear the cross [Matt. xxvii. 3-33].* Written, Gospel of the night 5, of the night of Friday [Matt. xxvii. 3-32].* Joined with it, latter Gospel, from Matthew: Matt. xxvii. 33-56.
- Fol. 69. a. 1. Gospel 2, from Mark: Then the soldiers took, to, Come down now from the cross [Mark xv. 16-32]. Written, in Great Friday, of the night, Gospel 6. Joined [with it], latter, from Mark: Mark xv. 32-41.†
- Fol. 69. a. 2. Gospel 3, from Luke: Then there were led with Jesus, two, to, Women who had come from Galilee, and beheld [Luke xxiii. 33-49].‡ See in Great Friday, of the night, Gospel 8.
- Fol. 69. b. 1. Gospel 4, from John: Then they brought Jesus from Caiaphas, to, Gave him to them that they might crucify him [John xviii. 28-xix. 16]. Written, in Great Friday, Gospel 4. Latter Gospel, from John: John xix. 23-37.§
- Fol. 70. a. 1. Gospel of Great Friday, at vespers. At the sign of the cup. Gospel, from Matthew: Matt. xxvii. 1-38. (Fol. 71. a. 1.) Luke: Luke xxiii. 39-43. (Fol. 71. a. 2.) Matthew: Matt. xxvii. 39-54. (Fol. 71. b. 2.) John: John xix. 31-37. (Fol. 72. a. 1.) Matthew: Matt. xxvii. 54-61.||
- Fol. 72. a. 1. Great Saturday, at matins. Gospel, from Matthew, and for the daytime of the morrow. Written, Gospel of Friday, of the night, 12 [Matt. xxvii. 62-66]. Gospel of priestly ministration at vespers, Gospel, from Matthew: Matt. xxviii. 1-15. (Then a note in Arabic [Fol. 72. b. 2.:] And from here shall be read the first of the resurrection. (Then in Syriac:) Gospel from Matthew: Matt. xvi. 19-20. [The Greek usually includes both.]
- Fol. 72. b. 2. (Note in Arabic:) Finished is the holy Evangel; and

* The first of these two lessons is the Syrian for matins, but nearly the Greek for the first hour. The second together with the following "latter gospel" nearly agree with the Greek first vigil. Separately they partly agree with the Greek "liturgy" lessons. With these day-time gospels, nothing in the Greek or Syrian order exactly corresponds.

† This corresponds with part of the Greek "liturgy" for 3d hour.

‡ This corresponds with part of the Greek for 6th hour.

§ This corresponds with part of the Greek for 9th hour.

|| These vesper gospels agree exactly with the lessons of the Greek "liturgy" for Good Friday.

- Fol. 72. b. 2. from God is the help (*i. e.*, by God's help). May God pardon its writer, also him who had a share (or, care) in it. Amen. And there follow the Gospels of the Resurrection, and the vigils. And the praise be to God, forever and ever.

Again we write Gospel 1, called of the resurrection. At matins, Gospel 1, from Matthew: Then the eleven disciples, to, Unto the end of the world. Written, Great Saturday, at matins, latter portion [Matt. xxviii. 16-20].

Gospel 2, from Mark: When the Sabbath was past, Mary Magdalene, to, For they were afraid [Mark xvi. 1-8]. Written, at Sunday 3 after passover, latter portion.

- Fol. 73. a. 1. Gospel 3, from Mark: Mark xvi. 9-20.

- Fol. 73. a. 2. Sunday 4. Gospel, from Luke: Luke xxiv. 1-12.

- Fol. 73. b. 1. Sunday 5. From Luke: Simon then rose and ran to the sepulchre, to, When he broke bread [Luke xxiv. 12-35]. See Tuesday of Rest. [The lesson here referred to is the fragment at the beginning of the MS.] Gospel 6. From Luke: Then Jesus stood in the midst of his disciples, and said to them, to, Glorifying and blessing God. Amen. [Luke xxiv. 36-53].* Written, at the feast of the ascension: the [gospel] of priestly ministration.

- Fol. 73. b. 2. Gospel 7. From John: John xx. 1-10.

- Fol. 74. a. 1. Gospel 8. From John: John xx. 11-18.

Gospel 9.† And when evening, to, That they [*error for ye*] might have life in his name [John xx. 19-31]. Written, at New Sunday.‡

Gospel 10. From John: John xxi. 1-14.

- Fol. 74. b. 2: Gospel 11. From John: Then Jesus appeared to his disciples when he arose from the dead. He said to Simon, to, Contain the books which should be written [John xxi. 14-25].§ Written, Saturday of Pentecost.

- Fol. 75. a. 1. (Note in Arabic: Finished is the holy Gospel. And there follow the vigils; and from God is the help. (A late marginal note in Arabic at the top of the page reads:) Seek for the eleventh [Gospel] at the Saturday of Pentecost. (Part of one word is obliterated.)

* The Greek order omits vs. 53.

† The space for the rubric "From John" is left blank.

‡ At Pentecost this lesson is referred to as John xx. 19-23; which also agrees with the Greek for this 9th resurrection Gospel. In a blank space in the line, a much later hand has added in Arabic what is probably meant for "Absolution for the day," but which really reads: The loosening (forgiving?) of Thomas—except that the first word is unintelligible.

§ The Greek order has vs. 15-25.

Before passing on to the Menology, it may be remarked that the chief deviations in the foregoing Evangelistarium from the Greek lessons occur in the week-days of the first week in Lent, in the lessons for Palm Sunday, and in those for the daytime of Good Friday. The main lesson for Palm Sunday coincides here with the Syrian; while those for the daytime of Good Friday coincide with neither the Greek nor the Syrian. The other deviations from the Greek are trivial; and they are comprehended in the following list, except as already marked in the foot notes: 3d Wednesday after passover coincides with the MS. cited by Scrivener as Gale O. 4. 22; but the ordinary Greek gives it for the following Friday, and gives that which is in the MS. for Friday, for this Wednesday. For Friday, in the same week, however, the Gale MS. has vss. 48-54. Saturday 3, the Greek ends at vs. 1. Friday 6, the Greek ended at vs. 10; but MS. Gale is same as here. Sunday 7, the Greek has vss. 2-13. After pentecost, Tuesday, the Greek ends at v. 11; Wednesday, the Greek has vss. 20-30; Thursday, the Greek has 31-41; Friday, the Greek has chap. vii. 9-18; Saturday 1, the Greek has 42-48; Sunday 1, the Greek omits vs. 39; Sunday 3, the Greek has vss. 22, 23, and puts the rest of the lesson in Monday of 2d week; Saturday 10, the Greek ends at chap. xviii. 1; Sunday 15, the Greek ends at vs. 40; Saturday 16, the Greek ends at vs. 30. After the Cross, or Saturday 1 in Luke, the Greek extends to vs. 46; Sunday 6 in Luke, the Greek omits vss. 36, 37; Saturday 8, the Greek has vss. 37-48; Saturday 10, the Greek has vss. 19-21; Saturday 14, the Greek has vss. 19-21; Saturday 18, where the MS. gives no lesson, the Greek has Luke xv. 1-10. For Wednesday of Passion Week, the Greek has John xi. 47-53, or xii. 17-47.

In translating the Menology, a few things have given some little trouble; chiefly the proper names. The Syriac spelling is such as to defy uniform transliteration. The familiar forms, where manifest, I have retained; and as to the rest, I have tried to be guided by common sense. There are two words in the MS. for 'commemoration' of a saint or event, but it has proved inconvenient to attempt to render them by different words. The Greek word for 'Gospel' I have rendered by 'evangel,' the Syriac by 'gospel.' There are two words for 'saint:' one meaning 'holy,' the other 'pious.' I have kept 'saint' for the first, and 'pious' for the last; as the last was sometimes used in Syriac [and apparently a few times in this MS.] as a euphemism for 'bishop.' The expression rendered 'mother of God' is more strictly *Theotokos* or *Deipara*. The exact Syriac expression for 'mother of God' does occur once or twice; but I could not well draw the distinction. The word

for 'apostle' occurs with a very wide signification; but to render it by 'missionary' would be false in most cases.

The following is a translation of the Menology, omitting the lessons except by indication. Those written out in full are unbracketed, but those which are merely referred to are enclosed in brackets. It would have been interesting to note the coincidences with the Greek Menology given in Scrivener's Plain Introduction, 2d ed., pp. 81, 82, and with the Jerusalem Syriac as given *ib.* p. 292, 293; but it could not be done without a sacrifice of space altogether disproportionate to the importance of the matter. It has not been convenient to keep the abbreviations of the original in translating.

MENOLOGY.

- Fol. 75. a. 1. Again we write the *taxis* (*i. e.* order) of feasts of the whole year, according to the Greek. At the beginning of the year is the month Ilâl (September). Days 30. Daytime, hours, 12; and of the night, hours 12.
1. Feast of pious Mar Simeon Stylites (*lit.* of the top of the pillar), and of the forty saints, and of the beginning of the year, and commemoration of the mother of God. Psalm: Thy name shall be remembered in all generations [Psa. xlv. (16) 17]. Section (or, Verse): Hearken, O daughter, and see, and incline thine ear [Psa. xlv. (9) 10]. And this Psalm is to be said at all the feasts of the mother of God at matins before the evangels; and if a man is prepared at the feast of Mar Simeon in his church, and will that the evangels be read, Gospel in 5 of Canûn 1 (December) [Matt. xi. 27-30], that which is of Mar Saba. And in priestly ministration, read the Gospel from Luke: Luke iv. 16-22.
- Fol. 75. a. 2. 2. Feast of chief priests, John Siûma [Faster] and Paul the younger; and the martyr Mama. Gospel of the martyr, written at Friday of the first week of the great fast, at vespers [John xv. 1-7]. For the chief priests, Gospel from Matthew: Matt. v. 14-19.
- Fol. 75. b. 2. 3. Martyrdom of Anthimus metropolitan of Nicomedia, and Theoctistus companion of Mar Euthymius. Gospel from John: John x. 9-16.
- Fol. 76. a. 1. 4. Martyrs, of the chief priests Babûla and his disciples. Gospel, from Luke: Luke x. 1-12.
- Fol. 76. a. 2. 5. Martyr Zechariah the prophet and of the martyr Thutiel.* Gospel, from Luke: The multitudes wondered at the gracious words. See 14 of Heziran (June) [Luke iv. 22-30]. Gospel, from Matthew, and for Zechariah: Woe unto you, Scribes and Phari-

* Perhaps error for "Joel," *olaph* being mistaken for *tau* by the scribe.

- Fol. 76. a. 2. sees, to, That all these things may come upon this generation [Matt. xxiii. 29-36]. Written, Tuesday of Passion, in the Gospel of matins, latter portion.
6. Eudoxius, and saint Christina, and the archangel Michael. Gospel, from Luke: Our Lord said to his disciples, He that heareth you heareth me [Luke x. 16]. See Saturday 10, from Luke [Luke x. 16-21]. Gospel of the martyr, written at Sunday 13, from Luke [Luke xviii. 18-27].
- Fol. 76. b. 1. 7. Of the martyr Sozontos, and the pious Abraham that was a robber. See in 20 of this month [*hiat* MS. at that place, but probably Luke xxi. 12-19 is intended.]
8. Birth day of the mother of God. Gospel of matins, from Luke: Luke i. 39-56. (Fol. 76. b. 2.) And in priestly ministration. Gospel, from Luke: Luke x. 38-42; xi. 27, 28.
- Fol. 77. a. 1. 9. Feast of Anna (Hanna) and Joachim, parents of the mother of God. Gospel, from Luke: Our Lord said, No man lighteth a candle and hideth it. See Gospel of Saturday 6, from Luke [Luke viii. 16-21].
10. Feast of saint Baribsaba and saint Saurianus, and adoration of the cross. Gospel, from John: And there were gathered together the chief priests and Pharisees, and they said. See Monday 6 of pente. [*error for* passover] [John xi. 47-54]. For the adoration of the cross. Gospel, from Matthew: Our Lord said, He that loveth father or mother. See Saturday 7 [Matt. x. 37-xi. 1].
- Fol. 77. a. 2. 11. Celebration of Saint Theodora, and adoration of the precious cross. For the martyr, from Mark: Great multitudes thronged Jesus. See in 4 of Cantn 1 (December) [Mark v. 24-28]. For the adoration of the cross, from John. See Tuesday 2 after passover [John iii. 16-21].
12. Feast of Saint Corito (Choritus?) and Autonomus, and Cornelius the centurion. Read from Matthew: He that loveth father or mother. See Saturday 7 [Matt. x. 37-xi. 1]. And the Gospel to be read this Saturday before the feast of the cross, lesson from John. Written, Monday in week 6 after passover [John xi. 47-54].
- Sunday before the feast of the cross. Gospel, from John: John iii. 13-17.
- Fol. 77. b. 1. 13. Dedication of the temple of the rebuilding in Jerusalem, and adoration of the cross. Lesson from John: Our Lord said, He that loveth his life shall lose it, to, For this cause came I unto this hour. See Tuesday of week 6 of pente. [*error for* passover], from the middle of the lesson onward [John xii.

- Fol. 79. b. 1. 25-27]. Lesson of the adoration, see Tuesday 6 of pente. [*error for passover*] [John xii. 19-36].
14. Elevation of the cross and commemoration of Mar John Chrysostom (lit., Mouth of Gold). Psalm before the Gospel of matins: God that worketh salvation in the midst of the earth [Psa. lxxiv. 12]. Section (or, Verse): O God, why hast thou cast us off forever [Psa. lxxiv. 1]. Gospel of matins, from John. See Tuesday of week 6 of pente. [*error for passover*] [John xii. 19-36]. Gospel of priestly ministration, from John: John xi. 53; xix. 6-37.
- Fol. 78. a. 2. Saturday after the feast of the cross, from John, Friday 4 of pente. [*error for passover*] [John viii. 21-30]. Sunday after the feast of the cross. Written, in Sunday 3 of the fast [Mark viii. 34-ix. 1].
15. Feast of the martyr and priest Acachius (Achai-cus?) metropolitan of Melitene, and the martyr Niceta (or Niceta). And on this day the receiving of sight of Paul, and celebration of the six holy councils. Gospel, in 20 of this month. [Probably Luke xxi. 12-19; but *hiat* MS. at that place]. Gospel for the martyr, from Matthew: Matt. x. 16-22.
16. Feast of the martyr Euphemia. Gospel, from Luke: Luke vii. 36-48. [The lesson breaks off at the end of the leaf, the next leaf being missing; but it probably extended to vs. 50. The next leaf present begins in the midst of the note at the beginning of the next month.]
- Fol. 79. a. 1. [Fragment of note at beginning of Tishrîn 1, or October.] Hanania of Damascus, of the 72; and of Peter, bishop. See 2 in Ilâl (September) [Matt. v. 14-19]. Latter, from Luke. Written in Saturday 11 [Luke xii. 32-40].
2. Chief priest Cyprianus, and Justina (Justinia?) the virgin. Gospel, written in 3 in Ilâl [John x. 9-16].
3. Dionysius the Great, bishop (or, Dionysius, archbishop) of Athens, disciple of Paul the apostle. Gospel, from Matthew: Matt. xiii. 45-54.
- Fol. 79. a. 2. 4. Martyrdom of Peter the priest and Bartholomew the disciple of Paul. Gospel, 4 in Ilâl [Luke x. 1-12].
5. Commemoration of Malactes (or, Malactis) and Saint Christinis. See in Sunday 10 from Luke [Luke xiii. 10-17].
6. Crowned of martyrs Mar Thomas, one of the twelve. Gospel, New Sunday [John xx. 19-23 (or 31)].
7. Crowned of martyrs Sergius and Bacchus. Psalm before the evangel of matins, in liturgy 4: Wonderful, O God. Section: Bless the Lord God. Gospel of matins, see Sunday 1 after pentecost [Matt. x. 32,

- Fol. 79. a. 2. 33, 37-39; xix. 27-30]. And in priestly ministration, from Luke. See 20 in Ilûl. [*hiat* MS. at that place.]
8. Saint Pelagia of Antioch, who was a harlot. Gospel, Sunday 10 from Luke [Luke xiii. 10-17].
9. Feast of James the apostle, and Saints Stratonicus and Seleucus. Gospel 8, from Luke [Luke x. 25-37; or ix. 37-43; according to whether Sunday 8, or Saturday 8 is meant. But if 8 of this month is meant, then Luke xiii. 10-17].
10. Martyrdom of John Dilmia (or Dilmia, or Dilumites, or, the Elamite). Gospel 10, from Luke [Luke xiii. 10-17; or x. 16-21].
11. Commemoration of the seventh council, and Nacterius (Nicoterius, Niceterius, or Nicetorius), chief priest. Gospel, 2 in Ilûl [Matt. v. 14-19].
- Fol. 79. b. 1. 12. Martyr Aprobus, and Trachys (or Trachon), and Andronicus, and Domininus, and Zenarius. See 20 in Ilûl [*hiat* MS. at that place, but probably Luke xxi. 12-19].
13. Feast of the martyrs Carpius and Paplius (or Poplius) and his fellows. See 15 in Ilûl [Matt. x. 16-22].
14. Feast of Marcius (or Marcion) and Nazarius (or Nazareus). See Wednesday after passover. [John i. 35-51].
15. Of the presbyter Lucianus from Antioch. See 3 in this month [Matt. xiii. 45-54].
16. Feast of Alginonus the centurion, and the prophet Josia [*sic.* Isaiah?], and feast of Gabriel the archangel. See 15 in Ilûl [Matt. x. 16-22].
17. Martyr Mamutus and his fellows. See in 2 in Ilûl [Matt. v. 14-19].
18. Apostle Mar Luke the Evangelist. Psalm of matins: Their tidings has gone forth in all the earth [Psa. xix. 5]. Section (or, Verse): The heavens declare [Psa. xix. 1]. Gospel, 1 Tishrîn 2 [Matt. x. 1-8]. And in priestly ministration, 10 from Luke [Luke xiii. 10-17; rather than x. 16-21].
19. Martyr Daurus. Gospel, 2 in Ilûl [Matt. v. 14-19].
20. Of Artimius and the crowned Cozma, and Damianus. See in Saturday 3 after passover [John xv. 17-xvi. 2].
21. Commemoration of pious Criton, disciple of Mar Antonius. Gospel, from Luke: Luke vi. 17-23.
- Fol. 79. b. 2. 22. Feast of Abacius, bishop. Gospel, in 5 of this month [Luke xiii. 10-17].
23. Commemoration of James the brother of our Lord, and of Simeon the Just. See Sunday 6, from Luke [Luke viii. 26-39].
- Fol. 80. a. 1. 24. Commemoration of chief priests Proclus and his

- Fol. 80. a. 1. fellows, 14 thousand and two hundred and fifty and two. Gospel, Saturday 11 from Luke [Luke xii. 32-40].
25. Commemoration of Marcianus and Martodos, chief priests of Constantinople. Gospel, from Luke: Luke xii. 2-12.
- Fol. 80. a. 2. 26. Feast of the martyr Demetrius, and finding of the head of John Baptist, 2d time, and commemoration of the great earthquake that took place. Psalm before the evangel at matins: Wonderful, O God. Section (or, Verse): Bless ye the Lord. Gospel of matins, from John: I am the true vine. See Monday of week 7 of pente. [*error for* passover] [John xiv. 27-xv. 7]. Gospel of the earthquake, from Matthew: Matt. viii. 23-27 (Fol. 80. b. 1.) For the martyr, see Saturday 3 after passover [John xv. 17-xvi. 2].
- Fol. 80. b. 1. 27. Feast of Artemidorus and Theodorus and the rest who were with them. Gospel, 15 in Ilâl [Matt x. 16-22].
28. Feast of Peter and Stephen and Andrew. Saturday 11, from Luke [Luke xii. 32-40].
29. Commemoration of Saint Saba, and Mar Simeon Târ Mesatha, and Mar Abraham and his fellows, and of Stephen companion of Mar Saba. Gospel, in 5 in Canûn 1 [Matt. xi. 27-30].
30. Feast of Saint Cyriacus and the chief priests. Gospel, 3 in Ilâl [John x. 9-16].
31. Commemoration of Saints Zenobius and Asterius and their fellows. Gospel, Saturday 11, from Luke. [Luke xii. 32-40].
- Tishrîn 2 (November). Days 30. Daytime, hours 10; and night time, hours 14.
1. Of the prodigals Cozma and Damianus, who were laid to rest. Gospel, from Matthew: Matt. x. 1-8.
- Fol. 80. b. 2. 2. Feast of Aphthonios and his fellows. Gospel, in 5 of Canûn 1 [Matt. xi. 27-30].
3. Dedication of the temple of Georgius and Joseph. Gospel 20 in Ilâl [*hiat* MS. at that place]. And martyrs, 29 in Heziran [Matt. xvi. 13-19].
4. Martyr Theodotis, and Saint Nicodora, and Ermios. Gospel, Saturday 11, from Matthew [Matt. xix. 3-12].
5. Of the martyr Galactinos and Apistion his wife, from Homs; and of the pious Joan(n)e (or Junia?). See 21 in Tishrîn 1 [Luke vi. 17-23].
6. Martyrdom of the chief priest Constantinus (*or*, Constantius), and Paul the confessor. Gospel, in 25 Tishrîn 1 [Luke xii. 2-12].
7. Martyrdom of the 33 martyrs from Melatine (*or* Melitene). Gospel, that of yesterday [Luke xii. 2-12].
8. Of the archangel Michael. Psalm before Gospel of matins: Bless, ye heavens and angels of the Lord,

- Fol. 80. b. 2. the Lord [Psa. cxlviii. 1]. Section (or, Verse): Bless, ye waters that are above the heavens [Psa. cxlviii. 4]. Gospel of matins, Saturday 10 from Luke [Luke xiii. 10-17]. And in priestly ministration, from John. See Sunday 4 of pente. [*error for* after passover (John v. 1-15); or else "John" is error for Matthew (Matt. viii. 5-13)].
- Fol. 81. a. 1. 9. Commemoration of the martyr Christophorus. See Monday 7 of pente. [*error for* passover, John xiv. 27-xv. 7]; latter part of the Gospel.
10. Martyr Euristius and [female] Saint Metronius. Gospel, 15 in Ilûl [Matt. x. 16-22]. The [female] saint, in Saturday 11, from Matthew [Matt. xix. 3-12].
11. Holy Mina and Victor (written Biktor) and Vicentius (written Bikentios). Gospel, in Saturday 3 after passover [John xv. 17-xvi. 2].
12. Of the chief priest John the beloved. Gospel 21 in Tishrîn 1 [Luke vi. 17-23].
13. Chief priest John Chrysostom. Gospel, in 2 in Ilûl [Matt. v. 14-19].
14. Apostle Philip. Gospel, Wednesday in week of rest; half of the lesson [John i. 35-51].
15. Of the confessors Simona and Goria (or, Gauria) and Habib, martyrs of Orrhæ (i. e. Edessa). Gospel, in 2 in Ilûl [Matt. v. 14-19].
16. Of Matthew the apostle and evangelist, and Saint Barlam, he in whose hand fire was put because sacrifices were to be made to the idol, and he would not. Gospel, Saturday 5, from Matthew [Matt. ix. 9-13].
17. Chief priest Gregorius, Wonder-worker (Thaumaturgus). Gospel, in day 1 of this month [Matt. x. 1-8].
18. Romanus. See 25 Tishrîn 1 [Luke xii. 2-12].
- Fol. 81. a. 2. 19. Of the holy martyrs Basius (Vasius?) and Neophytius, and their fellows. Gospel, Saturday 3 after passover [John xv. 17-xvi. 2].
20. Chief priests Maximus and Gennadius. Gospel, in 2 in Ilûl [Matt. v. 14-19].
21. Going up of the mother of God to the temple. Psalm: Thy name shall be remembered to all generations [Psa. xlv. 17]. Section (or, Verse): Instead of thy fathers shall be thy children [Psa. xlv. 16]. See Gospel of matins and of priestly ministration, 8 in Ilûl [Luke i. 39-58; and x. 38-42; xi. 27, 28].
22. [Female] Martyr Cilicilias. Gospel, Saturday 17 from Matthew [Matt. xxv. 1-13].
23. Peter the pious, of the chief priests of Conia [Iconium], and Anaphilistius and Alexander. Saturday 11, from Luke [Luke xii. 32-40].
24. Gregorius, and of the martyrdom of Matrinus (or Metrinus). See 3 in Ilûl [John x. 9-16].

Fol. 81. a. 2. 25. Of the chief priest and martyr Clementus, pope of Rome, and Peter of Alexandria. Gospel, Saturday 3 after passover [John xv. 17-xvi. 2].

26. Apostle Si[lvanus?], and Abacius. Gospel, 21 in Tishrin 1 [Luke vi. 17-23].

27. Of pious Palladius and the martyr James of Memphis. Gospel of the martyr, Monday 7 of pente. [error for after passover. John xiv. 27-xv. 7]. Gospel of the saint, 21 in Tishrin 1 [Luke vi. 17-23].

28. Of Stephen the younger, and the martyr Eirenarchus. Saturday 11, from Luke [Luke xii. 32-40].

Fol. 81. b. 1. 29. Pious Theodulus. See 5 in Canṭn 1 [Matt. xi. 27-30].

30. Apostle Andrew; from 12th Gospel from John: Then John was standing, and two of. See Wednesday in week of rest [John i. 35-51]. From the beginning of the lesson to the middle.

Canṭn 1 [December]. Days in it, 31. Daytime, hours 9; and night time, hours 15.

1. Of the apostle Hannania and the prophet Nahum. Gospel, in 2 in Ilāl [Matt. v. 14-19].

2. Prophet Habakkuk [*written by error* Habakub: cf. LXX. spelling]. See 14 Heziran [Luke iv. 22-30].

3. Prophet Sophonia [Zephaniah]. 5 in Ilāl [Matt. xxiii. 29-36].

4. Commemoration of Saints Barbara and Juline (*or*, Juliane), and of the pious John of Damascus. Psalm before the gospel of matins: My soul keepeth thy testimonies and loveth them wondrously [Psa. cxix. 167]. Section (*or*, Verse): Princes have persecuted me without a cause [Psa. cxix. 161]. Gospel of matins, from Matthew. Saturday 17, from Matthew [Matt. xxv. 1-13]. And in priestly ministration, from Mark. Mark v. 24-28.

Fol. 81. b. 2. 5. [6 is written first in outline, by mistake, but left unrubricated.] Feast of pious Mar Saba of Jerusalem. Gospel, from Matthew: Matt. xi. 27-30.

Fol. 82. a. 1. 6. Of the chief priest Nicolaus. Gospel, 21 in Tishrin 1 [Luke vi. 17-23].

7. The pious and chief priest Ambrosius. Gospel, 3 in Ilāl [John x. 9-16].

8. Of the pious and chief priest Sophronius. Gospel, in 2 in Ilāl [Matt. v. 14-19].

9. Conception of Hanna [with child] with the mother of God. Gospel, in Saturday 6, from Luke [Luke viii. 16-21].

10. Pious Ampeliusus. Gospel, in Saturday 11 from Luke [Luke xii. 32-40].

11. Pious Daniel Stylites. Gospel, in 5 in this month. [Matt. xi. 27-30].

- Fol. 82. a. 1. 12. Chief priest Espiridon (or, Spiridon). Gospel, in 3 in Ilâl [John x. 9-16].
 13. Of the five martyr soldiers. Gospel, in 20 in Ilâl [*hiat* MS. at that place].
 14. Saint Philemon, and Tarsus. Gospel, 25 in Ilâl [*hiat* MS. at that place].
 15. Martyr and chief priest Eleutherius. Gospel, in Saturday 10, from Luke [Luke x. 16-21].
 16. Of the prophet Haggai. Gospel, in 5 in Ilâl [Matt. xxiii. 29-28].
 Fol. 82. a. 2. 17. The pious and confessor John, chief priest, and Daniel the prophet, and the three children. Gospel, in Sunday 1 after pentecost [Matt. x. 32, 33, 37-39; xix. 27-30].
 18. The 3 children, and Philetus. Gospel, in 5 in Ilâl [Matt. xxiii. 29-36].

There follows Saturday 1 of the fathers, before the nativity. Gospel, Saturday 11, from Luke [Luke xii. 32-40].

Sunday 1 of the fathers, before the nativity. Gospel 11, from Luke [Luke xii. 32-40].

Saturday 2 of the fathers. Gospel, Saturday 12, from Luke [Luke xiii. 19-29].

Sunday 2 of the fathers, that is before the nativity. Gospel, from Matthew: Matt. i. 1-25.

[Here the lesson breaks off at the end of a leaf, and the next four leaves are missing.]

- Fol. 83. a. 1. Matt. xi. 27-30. [Fragment of lesson for 3 of Canûn 2].
 4. Of Gregorius of Crete (جرجس) and the martyr Zosimus. See in 20 in Ilâl [*hiat* MS. at that place]. Gospel of the day, from Luke: Luke vii. 17-23.
 Fol. 83. a. 2. 5. Dawn, holy feast of Epiphany. Gospel of priestly ministration of vespers, from Luke: Luke iii. 1-18.
 Fol. 83. b. 2. 6. Holy feast of Lights. Psalm before Gospel of matins: The voice of the Lord is upon the waters [Psa. xxix. 3]. Section (or, Verse): Give unto the Lord, ye sons of men [Psa. xxix. 1]. Gospel of matins, from Mark: Mark i. 9-11. Gospel for the blessing of the waters, Gospel, from Luke: Luke xx. 1-8. [Fol. 84. a. 1.] Gospel of priestly ministration, from Matthew: Matt. iii. 13-17.
 Fol. 84. a. 1. 7. Right hand of John the Baptist. Gospel, Saturday of Rest [John iii. 22-28]. Gospel for Mar John, from John: John i. 29-34.
 Fol. 84. a. 2. Saturday after the feast of Epiphany. Gospel from Matthew: Matt. iv. 1-11.
 Fol. 84. b. 1. Sunday after the feast of Epiphany. Gospel from Matthew: Matt. iv. 12-17.

- Fol. 84. b. 2. 8. Martyr Xenophon and his fellows. Gospel, Saturday 17, from Matthew [Matt. xxv. 1-13]. Gospel of the day, from Luke: Luke iii. 19-22.
9. Of the martyr Polycarp. See Monday of week 7 of pente. [*error for* after passover. John xiv. 27-xv. 7]. Gospel of the day, from Luke: Luke xx. 1-8.
- Fol. 85. a. 1. 10. Of Gregorius of Nyssa, and Domitianus and Meletius. Gospel of the chief-priests (or, chief-priestly ministrations), Tuesday after pentecost [Matt. iv. 23-v. 13]. The others, see in 21 Tishrîn 1 [Luke vi. 17-23]. Gospel of the day, from Luke: Luke iv. 1-13.
- Fol. 85. a. 2. 11. Saint Theodosius. See Gospel, 5 in Canûn 1 [Matt. xi. 27-30]. Gospel of the day, from John: John x. 39-42.
- Fol. 85. b. 1. 12. Feast of Astenus (or Stenus, or Astunios), who caused water to gush forth from the well, and Saint Tathedas (?). Gospel, in 5 in Canûn 1 [Matt. xi. 27-30].
13. Martyrs Armilius and Astratius (or Stratius). Seek in 20 in Ilûl [*hiat* MS. at that place].
14. The fathers who were slain in Mt. Sinai. Gospel 11, from Luke [either Luke xiv. 16-24 (Sunday 11), or xii. 32-40 (Saturday 11)].
15. Chief priest Babûla, and of the children, and John his lord. Gospel, 20 in Tishrîn 1 [John xv. 17-xvi. 2].
16. Adoration of the precious chain that fell off from the feet of Peter. Psalm before Gospel of matins: Instead of thy fathers shall be thy children [Psa. xlv. 16]. Section (or, Verse): My heart is inditing a good matter [Psa. xlv. 1]. Gospel of matins, from John. Written, Wednesday in week of Rest [John i. 35-51], part 1. And in priestly ministrations, from John: Simeon, son of Jona, lovest thou me [John xxi. 17]. Written, Saturday of pentecost [*i. e.*, before pentecost: John xxi. 15-25].
17. Of the pious Antonius. Gospel, in 21 in Tishrîn 1 [Luke vi. 17-23].
18. Chief priests Athanasius and Cyril. Gospel, in 2 in Ilûl [Matt. v. 14-19].
- Fol. 85. b. 2. 19. Father of pious Theodotus. Seek Saturday 11, from Luke [Luke xiv. 16-24].
20. Of pious Euthymus of Jerusalem. Gospel, in 5 in Canûn 1 [Matt. xi. 27-30].
21. Of Maximus the confessor. Gospel, in Sunday 10, from Luke [Luke xiii. 10-17].
22. Apostle Timotheus, and Anastasius. Gospel, in Sunday 1 after pente. [Matt. x. 32, 33, 37-39; xix. 27-30]. Latter, in 2 in Ilûl [Matt. v. 14-19].
23. Saints Clementus and Agathangelus. Gospel, from John: John xii. 24-36.

- Fol. 86. a. 1. 24. Of Saint Vincentius (written Bincentius). See in 15 in Ilâl [Matt. x. 16-22].
 25. Gregorius speaker of divinity (Theologus). See in 21 in Tishrîn 1 [Luke vi. 17-23].
 26. Martyr Asterius and his fellows. See in Saturday 3 after passover [John xv. 17-xvi. 2].
 27. John Chrysostom and Mar Simeon Stylites. Gospel, in 20 in Ilâl, latter [*hiat* MS. at that place]. For John, 3 in Ilâl [John x. 9-16].
 28. Of the pious and teacher Ephrem the Syrian. Gospel, from Luke: Luke xv. 2-10. [Fol. 86. a. 2.] Latter, in the order of the Greeks. Written in 5 in Canûn 1 [Matt. xi. 27-30].
- Fol. 86. a. 2. 29. Saint Æginetius. Seek 5 in Canûn 1 [Matt. xi. 27-30].
 30. Xenophon and his sons. Seek Saturday 3 after passover [John xv. 17-xvi. 2].
 31. Cyrus and John. Seek 1 in Tishrîn 2 [Matt. x. 1-8].
- Shobat [February]. Days in it, 28. Daytime, hours 11; and night time, hours 13.
 1. Feast of Saint Criton. Seek in Saturday 10, from Luke [Luke x. 16-21].
 2. Going up [*i. e.* presentation] of our Lord to the temple. Gospel of matins, in 8 in Ilâl [Luke i. 39-56]. And in priestly ministration, from Luke: Luke ii. 22-40.
- Fol. 86. b. 2. 3. Feast of Simeon and Hanna the prophetess. Seek that of yesterday, latter portion [Luke ii. 22-40].
 4. Pious Isidorus, presbyter of Alexandria. Seek in 21 in Tishrîn 1 [Luke vi. 17-23].
 5. Martyr Agathe. Seek in Sunday 17, from Matthew [Matt. xv. 21-28].
 6. Martyr Mar Lilan, from Hôms. Seek in 5 in Canûn 1 [Matt. xi. 27-30].
 7. Pious Parthenius. Seek Monday of week 7 of pente. [*error for* after passover. John xiv. 27-xv. 7].
 8. Martyr Theodorus the soldier. Seek Saturday 1 of the fast [Mark ii. 23-iii. 5]. See 18 in Tishrîn 1 [Luke x. 16-21].
- Fol. 87. a. 1. 9. Saint Pelagius. Seek Saturday 3 after passover [John xv. 17-xvi. 2].
 10. Of the martyr Nicephorus. Seek 20 from Ilâl [*hiat* MS. at that place].
 11. Chief priest Basilius of Sebaste. Seek Monday in Week 7 of pente. [*error for* after passover. John xiv. 27-xv. 7].
 12. Saint Meletius. Seek in 2 in Ilâl [Matt. v. 14-19].
 13. Pious Martininus. Seek in 5 in Canûn 1 [Matt. xi. 27-30].

- Fol. 87. a. 1. 14. Pious Euxentius (or, Auxentius?). Seek in beginning of Tishrîn 2 [Matt. x. 1-8].
 15. Apostle Onesimus. Seek in 18 in Tishrîn 1 [Luke x. 16-21].
 Saint Pamphilus and his fellows. Seek in Saturday 3 after passover [John xv. 17-xvi. 2].
 17. Saint Euphrosyne. Seek in Saturday 10 from Luke [Luke x. 16-21].
 18. Saint Lan[re]ntius, pope of Rome. See 3 in Ilâl [John x. 9-16].
 19. Of pious Euxenbius and Eustath[ius] patriarch of Antioch. Seek in 2 in Ilâl [Matt. v. 14-19].
 20. Pious Papontius (or Pepontius, or Paphontius) Arsius [*error for* of Tarsus?], disciple of Paul. Seek in 21 in Tishrîn 1 [Luke vi. 17-23].
 21. Chief priests Timotheus and his fellows. Seek in Saturday 3 after passover [John xv. 17-xvi. 2].
 22. Chief priest Thomas of Constantinople, and Elisabeth the nun. Seek in 5 in Canûn 1 [Matt. xi. 27-30].
 23. Of the martyr and chief priest Polycarp. Seek in 23 in Canûn 2 [John xii. 24-36].
 Fol. 87. a. 2. 24. Finding of the head of John the Baptist. Gospel, from Matthew: Matt. xi. 2-15.
 Fol. 87. b. 1. 25. Pious Teresius, chief priest, and Marcellus. Seek in Saturday 11 from Luke [Luke xii. 32-40].
 26. Saint Porphyrius, bishop. Seek in 21 in Ilâl [*hiat* MS. at that place].
 27. Martyr Papias, and the rest. Seek 20 in Ilâl [*hiat* MS. at that place].
 28. Feast of the martyr Saduthah, and Proco[pious] confessor. Seek 25 in Tishrîn 1 [Luke xii. 2-12], latter portion.

Month Adar [March]. Days in it 31. Hours of day-time 12, and hours of night time 12.

1. Feast of Marcellus, and the martyr Eudocia. Seek 16 in Ilâl [Luke vii. 36-50].
 2. Feast of the martyr Eutropius and his fellows. See Saturday 3 after passover [John xv. 17-xvi. 2].
 3. Feast of Sabinus and the rest. See in Saturday 11, from Luke [Luke xii. 32-40].
 4. Feast of the pious Æsopus, and Paul and his sister, and their fellows. Seek 25 in Tishrîn 1 [Luke xii. 2-12].
 Fol. 87. b. 2. 5. Of the pious Gerasinus and Conon. Seek 25 in Tishrîn 1 [Luke xii. 2-12].
 6. Feast of the forty and two martyrs. Seek 9 in this month [Matt. xx. 1-16].
 7. Of the pious Archidinus and Therius [*error for* Thaddeus?] and his fellows. See in 20 in Ilâl [*hiat* MS. at that place].

- Fol. 87. b. 2. 8. Feast of the pious Theophiletus, chief priest of Nicomedia. Seek 2 in Ilûl [Matt. v. 14-19].
 9. Feast of the forty holy martyrs. Gospel, from Matthew: Matt. xx. 1-16.
 10. Feast of pious Sophronius, chief priest of Jerusalem. 2 in Ilûl [Matt. v. 14-19].
- Fol. 88. a. 2. 11. Feast of the priest and martyr Aphorion and Quadratus and his fellows. See Sunday 10, from Luke [Luke xiii. 10-17].
 12. Siuma (Faster) pious Theophanus. Gospel, 27 in Tishrîn 1 [Matt. x. 16-22].
 13. Feast of Saint Nicephor. See 3 in Ilûl [John x. 9-16].
 14. Feast of Saint Nicodemus, and Christophorus, and the martyr Taranetus. See 25 in Tishrîn 1 [Luke xii. 2-12].
 15. Holy feast of Anitius (or Anetius) and our father Amon. See 27 in Tishrîn 1 [Matt. x. 16-22].
 16. Feast of the pious Euxius, and Saint Sabinus. See 25 in Tishrîn 1 [Luke xii. 2-12].
 17. Feast of the man of God, Alexius, and of the earthquake that occurred in the days of Theodosius. See in Sunday 3 of the fast [Mark viii. 34-ix. 1].
 18. Feast of pious Cyrillus, chief priest of Jerusalem. Seek 2 in Ilûl [Matt. v. 14-19].
 19. Feast of Chrysanthus and Nazadria, and the fathers who were strangled in the smoke in the convent of Mar Saba. See in Saturday 3 after passover [John xv. 17-xvi. 2]. For the fathers, in Saturday 17, from Luke [Luke xx. 46-xxi. 4].
- Fol. 88. b. 1. 20. Feast of Saint Maraia and pious Marcus. Seek 5 in Canûn 1 [Matt. xi. 27-30].
 21. Feast of pious Hanania, and Cyrillus, bishop. See 3 in Ilûl [John x. 9-16].
 22. Feast of the pious and chief priest Thomas, patriarch of Constantinople. See 3 in Ilûl [John x. 9-16].
 23. Feast of the (female) martyr Christine, and Nicon the monk. Seek in Saturday 17 from Matthew [Matt. xxv. 1-13].
 24. Feast of Alexander and his fellows, and Saint Artemonus, and feast preceding the Annunciation. Seek 21 in Tishrîn 1 [Luke vi. 17-23].
 25. Feast of the Annunciation. Gospel of matins, 8 in Ilûl [Luke i. 39-56]. And of priestly ministrations. Gospel, from Luke: Luke i. 24-38.
- Fol. 89. a. 1. 26. Feast of pious Isaac and the archangel Gabriel. Seek Saturday 10, from Luke [Luke x. 16-21].
 27. Of pious Metronis. Seek Sunday 10, from Luke [Luke xiii. 10-17].
 28. Of the priest and martyr Basilus. Seek in Saturday 3 after passover [John xv. 17-xvi. 2].

- Fol. 89. a. 1. 29. Of pious John, chief priest of Jerusalem. Seek in Saturday 11, from Luke [Luke xii. 32-40].
 30. Our pious father Climus. Seek 5 in Canṭn 1 [Matt. xi. 27-30].
 31. Feast of the martyr Mannadrus and Anapitus and Theophilus. See 20 in Ilāl [*hiat* MS. at that place].

Month Nisan [April]. Days in it 30. Daytime, hours 13; and night time, hours 11.

1. Feast of Miriam the Egyptian. Gospel, 4 in Canṭn 1 [Mark v. 24-28].
 2. Feast of Saints Epiphanius and Dasius, and of Stephen the companion. See 4 in Ilāl [Luke x. 1-12].
 3. Ezekiel and Isaiah, and Saint Theodosia. Seek 5 in Ilāl [Luke iv. 22-30].
 4. Feast of the martyr Theodulus, and Agatha and Pius. Seek 20 in Ilāl [*hiat* MS. at that place].
 Fol. 89. a. 2. 5. Feast of the martyrdom of Epomismus. See 4 in Canṭn 1 [Mark v. 24-28].
 6. Feast of Saint Euthysius, monk of Constantinople, and feast of the hundred and twenty martyrs in the region of the city of Peras. See in Saturday 3 after passover [John xv. 17-xvi. 2].
 7. Feast of the chief priest and martyr Georgius, and Callopius. See 20 in Ilāl [*hiat* MS. at that place].
 8. Feast of apostle Appira (or Eppira) and Doionos (or, and of Junius), of the seventy, and pious Celestinus pope of Rome. See 6 in Ilāl [Luke x. 16-21; or xviii. 18-27].
 9. Feast of the martyr Patramuthius, and the pious Cyprius. Seek 25 in Tishrīn 1 [Luke xii. 2-12].
 10. Feast of the martyr Terentius and his fellows. See 20 in Ilāl [*hiat* MS. at that place].
 11. Feast of the martyr and chief priests Antipas the pure and Trophonius. Seek in Saturday 3 after passover [John xv. 17-xvi. 2].
 12. Feast of Saint Garnetius, father of Georgius. Seek 15 in Ilāl [Matt. x. 16-22].
 13. Feast of the martyr Theodosius. Seek in Saturday 3 after passover [John xv. 17-xvi. 2].
 14. Feast of pious Simeon and James, chief priests of Antioch. See 2 in Ilāl [Matt. v. 14-19].
 15. Feast of the martyr Launidoger (or Leonidoger) and his fellows, and Aristarchus of the seventy. See in Sunday 1, from Matthew [Matt. x. 32, 33, 37-39; xix. 27-30].
 Fol. 89. b. 1. 16. Feast of the martyr Eirenichas and Caunia. See in Saturday 17, from Matthew [Matt. xxv. 1-13].
 17. Feast of Saint Simeon and his fellows, and Saint Gapitus (i. e. Agapetus) pope of Rome. Gospel, 2 in Ilāl [Matt. v. 14-19].

- Fol. 89. b. 2. 18. Saint James and his fellows, servant of Georgius. See in Saturday 3 after passover [John xv. 17-xvi. 2].
19. Feast of the martyr Longinus and Aphrodisius. Seek 15 in Ilûl, that is of the martyr Nicita (or Niceta) [Matt. x. 16-22].
20. Feast of the martyrs Athanasius and Nanilus and their sons, and Saint Papontus (or, Pepontos). See 20 in Ilûl [*hiat* MS. at that place].
21. Feast of Saint Januarius and the rest; [and] Maximus. Seek 25 in Tishrîn 1 [Luke xii. 2-12]. And Maximus, in Saturday 11, from Luke [Luke xii. 32-40].
22. Of pious Theodorus the companion. See 23 in Canûn 2 [John xii. 24-36].
23. Martyr Georgius. Psalm before Gospel of matins, in liturgy 4: Wonderful is God in his holiness. Section (or, Verse): Bless ye the Lord. Gospel from John: I am the true vine [John xv. 1]. See Monday 7, of pentecost [*or*, after passover (?)] [John xiv. 27-xv. 7]. Gospel of priestly ministration, Saturday 3 after passover [John xv. 17-xvi. 2].
24. Pious Mar Saba the soldier, and pious Timotheus. See 20 in Canûn 2 [Matt. xi. 27-30].
- Fol. 89. b. 2. 25. Apostle Mark. Seek in Saturday 7, from Luke [Luke ix. 1-6].
26. Priest and martyr Basilus. See in Saturday 3 after passover [John xv. 17-xvi. 2].
27. Saint Simeon of Jerusalem, and Saint Christophorus. Gospel 25 in Tishrîn 1 [Luke xii. 2-12].
28. Of the apostle Saint Anasonus (error for Jason, probably, in one letter of the name). Gospel, 20 in Ilûl [*hiat* MS. at that place].
29. Of pious Andrew of Cretes. See 21 in Tishrîn 1 [Luke vi. 17-25].
30. Of the apostle James son of Zebedee. Gospel 1, from Luke [Luke iv. 31-41; or v. 1-11].

Month Iyyar [May]. Days in it 31. Daytime, hours 14; and night time, hours 10.

1. Prophet Jeremiah. See lesson 29 in Heziran, that of priestly ministration [Matt. xvi. 13-19].
2. Feast of Prozoius, and the saint and chief priest Athanasius of Alexandria. See 2 in Ilûl [Matt. v. 14-19].
3. Martyr Timotheus and Moras his sister. Seek 20 in Tishrîn 1 [John xv. 17-xvi. 2].
4. Martyr Phrodisius (i. e. Aphrodisius) and those with him. See 20 in Ilûl [*hiat* MS. at that place].
5. Martyr Anaupitus (probably error, in one letter, for Japetus), and Agananus, and Saint Pelagia, and Barbarus martyr. Seek 15 in Ilûl [Matt. x. 16-22].

- Fol. 89. b. 2. 6. Feast of Jamtria (or Emetria, or Demetria?) and Job the Just. See 9 in Adar [Matt. xx. 1-16].
- Fol. 90. a. 1. 7. Democius martyr, and his revelation (vision) of the cross in the sky in Jerusalem. See Monday in week 6 of pentecost [*error for* after passover : John xi. 47-54].
8. Apostle John, evangel [*sic*], and the pious Arsenius. Psalm before the evangel of matins : Instead of thy fathers shall be thy children [Psa. xlv. 16]. Section (or, Verse) : My heart is inditing a good matter [Psa. xlv. 1]. Gospel of matins, from John. Written, Saturday, end, of pentecost [John vii. 37-52 ; viii. 12]. And of priestly ministration, from John : John xix. 25-27 ; xxi. 24.
9. Of Isaiah the prophet and the martyr Christophorus. Gospel, Wednesday of week 6 after passover [John xii. 36-47].
- Fol. 90. a. 2. 10. Apostle Simeon of the 12. Seek day 1 in Tishrîn 2 [Matt. x. 1-8].
11. Feast of Demiocius (or, of Myocius). Seek day 2 in Tishrîn 1 [John x. 9-16].
12. Of pious Epiphanius chief-priest of Cyprus, and chief priest Germanus of Constantinople, and the martyr Gleumaria. Seek in 11 Tishrîn 1 [Matt. v. 14-19].
13. Of the holy martyr Alexander. Gospel, in Saturday 3 after passover [John xv. 17-xvi. 2].
14. Of the saints and martyrs Isidorus and Methodius. Gospel, in Saturday 7, from Luke [Luke ix. 1-6].
15. Feast of the mother of God, and Saint Theodorus disciple of pious Pachumius. Lesson in 21 in Tishrîn 1 [Luke vi. 17-23].
16. Feast of Zacharias the prophet, fathers [*sic*] of Mar John the Baptist. Gospel, in 5 in Ilâl [Matt. xxiii. 29-36 ; or Luke iv. 22-30 ?].
17. Feast of the martyr Solinus, and Dionysus, and Andrew and Paul. Lesson, 20 in Ilâl [*hiat* MS. at that place].
18. Feast of Pithoterus and Georgius and Andronicus of the seventy. Seek in 15 in Ilâl [Matt. x. 16-22].
19. Of Patric[us] bishop, and Theodorus and Acacius. Gospel, Saturday 1, from Luke [Luke iv. 31-41].
- Fol. 90. b. 1. 20. Of the martyr Thalle. Seek in 25 in Tishrîn 1 [Luke xii. 2-12].
21. Feast of the pure sovereigns Constantinus and Helene. See Thursday in week 5 after passover [John ix. 39-x. 9]. Latter half of the lesson.
22. Feast of the martyrs Basilicus and Judas the apostle. Gospel, in 15 in Ilâl [Matt. x. 16-22]. Latter, in 20 of it [*hiat* MS. at that place].

- Fol. 90. b. 1.** 23. Of the martyr Meletius, and Micha, confessor. Seek in 25 in Tishrîn 1 [Matt. x. 16-22]. Latter half of the gospel.
24. Feast of the pious Mar Simeon Stylites, worker of wonders, and the martyr Celestinus. Seek in 10 in Canûn 2 [Luke iv. 1-13].
25. Of pious Sozontos, and the finding of the head of Mar John the Baptist, 3d time. Seek in 2 in Ilûl, that of John Siuma (i. e. Easter) [John xv. 1-17; or Matt. v. 14-19; probably the latter].
26. Feast of the priest and martyr Therapontus, and the apostle Carabus of the seventy. Seek in 18 in Tishrîn 1 [Matt. x. 1-8].
27. Of the pious Coruantes, and Judas son of Joseph, and the martyr Adidmus (Didymus?). Seek in 20 in Ilûl [*hiat* MS. at that place].
28. Feast of the martyr Aldius, and the martyr Crescentus. See in Sunday 1, from Matthew [Matt. x. 32, 33, 37-39; xix. 27-30].
- Fol. 90. b. 2.** 29. Feast of the holy martyr Theodosia. Seek in Saturday 17, from Matthew [Matt. xv. 21-28].
30. Athletics (or Miseries, or Struggles) of the holy (saints), those in Nicomedia, and Mar Aisibus. Seek 25 Canûn 1 [*hiat* MS. at that place].
31. Feast of the martyr and saint Hermius. See 2 in Ilûl [Matt. v. 14-19].

Month Heziran [June]. Days in it 30. Daytime, hours 15; and night time, hours 9.

1. Feast of saint Justinus. Seek Saturday 3 after passover [John xv. 17-xvi. 2].
2. Feast of the chief priest Nicophor. See in Saturday 11, from Luke [Luke xii. 32-40].
3. Of saint Lucianus and Polis, infants. See lesson, 15 in Ilûl [Matt. x. 16-22].
4. Of the chief priest Metropanus. Seek 2 in Ilûl [Matt. v. 14-19].
5. Feast of saint Dorotheus, and chief priest Eustath[us]. See in Saturday 11, from Luke [Luke xii. 32-40].
6. Feast of pious Vesarinus (written Besarinus), and the archangel Michael, and the [female] martyr Sebastianis. See in 4 in Canûn 1 [Mark v. 24-28].
7. Feast of the priest and martyr Dorotheus, patriarch of Tyre. Seek 3 in Ilûl [John x. 19-16].
8. Feast of Theodorus the soldier, who is usually celebrated in the fast, who was martyred in the days of Lucianus. Seek in Saturday 3 after passover [John xv. 7-xvi. 2].
- Fol. 91. a. 1.** Of the apostle Protoratus, and Cyrillus, lord of Alexandria. See 18 in Tishrîn 1 [Luke x. 16-21].

- Fol. 91. a. 1. 10. Feast of the priest and martyr Timotheus, and Meletius and his fellows, 11 thousand. See lesson in Saturday 7, from Luke [Luke ix. 1-16].
 11. Feast of the apostle Bartholomew in the city (*Arabicism* for region) of Cyprus. See 14 in this month [Luke iv. 22-30].
 12. Feast of pious Eunophorius Cita (circuit-maker); he, moreover, that traveled about; and saint Lulin. Seek 5 in Canūn 1 [Matt. xi. 27-30].
 13. [Female] martyr Aciolinis. Seek lesson, 4 in Canūn 1 [Mark v. 24-28].
 14. Feast of the prophet Elisha, disciple of Elias the prophet. Gospel of priestly ministration, from Luke: Luke iv. 22-30.
- Fol. 91. b. 1. 15. Feast of the prophet Amoz, father of Isaiah the prophet. See 2 in Ilāl [Matt. v. 14-19]. Latter, 14 in this month [Luke iv. 22-30].
 16. Pious Timonus. Seek 21 in Tishrīn 1 [Luke vi. 17-23].
 17. Feast of saint Manuel and his fellows. See 20 in Ilāl [*hiat* MS. at that place].
 18. Feast of the martyr Leontius of Tripolis. Seek in Saturday 3 after passover [John xv. 17-xvi. 2].
- Fol. 91. b. 2. Feast of the apostle Judas. Seek 2 in Ilāl [Matt. v. 14-19].
 20. Saint Methodius. See in Saturday 11, from Luke [Luke xii. 32-40].
 [21 is omitted, probably by the scribe's oversight.]
 22. Feast of the chief priest Eusebius of Samosata. Seek 25 in Tishrīn 1 [Luke xii. 2-12].
 23. Feast of the martyr Agrippinis. See in Sunday 17, from Matthew [Matt. xv. 21-28].
 24. Feast of the birth of Mar John the Baptist. Psalm before Gospel of matins: And thou, child, shalt be called the prophet of the Highest [Luke i. 76]. Section (or, Verse): For he shall go before the face of the Lord [Luke i. 76]. Gospel, from Matthew, written in 24 in Shobat, that of the finding of his head [Matt. xi. 1-15]. And in priestly ministration, lesson from Luke: Luke i. 1-25, 57-68, 76-80.
- Fol. 92. b. 1. 25. Feast of the martyr Fabronia (Fevronia?) the Syrian, from Nisibīn. Seek in Saturday 17, from Matthew [Matt. xxv. 1-13].
 26. Of pious David. See in 21 in Tishrīn 1 [Luke vi. 17-23].
 27. Of Samson the upright, of the house of healing [Xenodochus?]. Seek in Saturday 11, from Luke [Luke xii. 32-40].
 28. Feast of the holy workers of wonders, Cyrus and John. See in Saturday 7, from Luke [Luke xi. 1-6].

- Fol. 92. b. 1. 29. Crowned chiefs of the apostles, Peter and Paul. Psalm before evangel of matins: Instead of thy fathers shall be thy children [Psa. xlv. 16]. Section (or, Verse): My heart is inditing a good matter [Psa. xlv. 1]. Gospel, from John: Simeon Bar Jona, lovest thou me [John xxi. 5]. Written, Saturday, end, of pentecost [*error for pass.*: John xxi. 14-25]. And in priestly ministration, Gospel, from Matthew: Matt. xvi. 13-19.
30. 12 Apostles. Their lesson is written in the first day of Tishrîn 2 [Matt. x. 1-8].
- Fol. 93. a. 1. Mouth Tammuz [July]. Days in it 31.
1. Feast of the physicians Cozma and Damianus. See Gospel, 1 in Tishrîn 2 [Matt. x. 1-8].
 2. Of the Annunciation (~~22. 11. 11~~ probably a clerical error) of the mother of God. Seek 8 in Ilâl [Luke i. 39-56]. Latter, in Sunday 15, from Luke [Luke xix. 1-10].
 3. Feast of Mar Thomas the apostle, and Hyacinthus (written Jyacinthus) martyr. See 25 in Ilâl [*hiat* MS. at that place].
 4. Feast of Saint Andrew of Cretes. Gospel, Thursday of week 5 after passover [John ix. 39-x. 9].
 5. Feast of pious Stephen Girolampadius, and Martha the pious, mother of Mar Simeon the fearing (or, he that swore). Gospel, 5 in Canûn 1 [Matt. xi. 27-30].
 6. Of pious Thomas and pious Domit[ianus], and the [female] martyr Cyriace. Gospel, in Saturday 17, from Matthew [Matt. xxv. 1-13].
 7. Of pious Sosius. See 25 in Tishrîn 1 [Luke xii. 2-12].
 8. Feast of the martyr Procopius, and translation of the body of Martha the pious. Seek Gospel, in Saturday 10, from Luke [Luke x. 16-21].
 9. Dedication of the temple of the three children, Hanania and Azaria and Mishael, and Patrimuthius. And in this day appeared the mother of God at the gushing of the water in the mountain of Daphne. For she appeared there to the apostles and John, when they wandered by the Holy Spirit from Sion mother of the church, and established there the first born of Antioch, the Syrian city, having obtained mercy in God. Its consecutive (*akolouthia*), 8 in Ilâl [Luke i. 39-56; or, x. 38-42; xi. 27, 28]. And dedication of the temple of the three children, 13 in Ilâl [John xii. 25-27], that is of the rebuilding.
- Fol. 93. a. 2. 10. Feast of the forty and five martyrs that suffered in Nicopolis. Gospel, 9 in Adar [Matt. xx. 1-16].
11. Feast of Saint Euphemia. Gospel, 16 in Ilâl [Luke vii. 36-50].

- Fol. 98. a. 2. 12. Feast of the Martyrs Procolus and Eiladion [or, Ailadion], and Andrew the soldier, and the martyrs their fellows. See Gospel, 20 in Ilûl [*hiat* MS. at that place].
13. Feast of the archangel Gabriel, and the martyr Thutiel, and Serapion. Their Gospel, 18 in Tishrîn 1 [Luke x. 16-21, or Matt. x. 1-8; or Luke xiii. 10-17].
14. Feast of Acola the apostle, and Saint Joseph who was tortured because of the image. Consecutive (*akolouthia*), that of yesterday [Luke x. 16-21; or Matt. x. 1-8; or Luke xiii. 10-17].
15. Feast of the martyr Cyriacus and his mother Julita, and the pious Mar Asia (physician?). See Gospel, Saturday 10, from Matthew [Matt. xvii. 24-xviii. 4]. Latter half.
16. Feast of the martyr Anthinogamus (*clerical error* for Euthinogamus?). Gospel, 2 in Ilûl [Matt. v. 14-19].
- Fol. 98. b. 2. Sunday after the feast of Cyriacus. Feast of the fathers, six hundred and 30 of Chalcedon, who were expelled to Saura Artica. Their Gospel, 11 Tishrîn 1 [Matt. v. 14-19]. Latter, 2 in Ilûl [Matt. v. 14-19].
17. Feast of the martyr Marinas. See in Saturday 17, from Matthew [Matt. xxv. 1-13].
18. Feast of the martyr Melanus, and John the metropolitan. Gospel, Tuesday 3 after passover [John vi. 27-33].
19. Feast of pious Dio, and Democrine sister of Saint Basilus. Gospel, 5 in Canûn 1 [Matt. xi. 27-30].
20. Feast of the prophet Elias and the holy son of God Cleopas. Stichon of matins: Holy were Moses and Aaron among his priests [Psa. xcix. 5, 6]. Section (or, Verse): The Lord reigneth; let the people tremble [Psa. xcix. 1]. Gospel, from Luke: Wondered at the gracious words. Written, 14 in Heziran [Luke iv. 22-30]. And in priestly ministration, Gospel, 6 in Ab, of the consecration [Luke ix. 28-36; or Matt. xvii. 1-9].
21. Of the feast of pious Joanne, and Simeon, he who was despised because of the Messiah. Gospel, 5 in Canûn 1 [Matt. xi. 27-30].
22. Feast of pious Mar Phocas. Gospel, in Saturday 10, from Luke [Luke x. 16-21].
23. Feast of the martyr Trophimus and his fellows 13, and Mary Magdalene. See 15 in Ilûl [Matt. x. 16-22].
24. Feast of Saint Christi[ne] of Tyre. Gospel, 2 in Canûn 1 [Luke iv. 22-30].
25. Commemoration of Hanna, mother of the mother of God, and Saint Praxia. Seek in Saturday 6, from Luke [Luke viii. 16-21].

- Fol. 93. b. 2. 26. Feast of the pious Mar Simeon Stylites, and Saint Armulaus, priest. Gospel, 15 in Ilûl [Matt. x. 16-22].
 27. Feast of the martyr Panteleemon. Consecutive (*akolouthia*) of matins, that of Mar Georgius. [See 23 Nisan, also 7 Nisan]. And of priestly ministration, lesson, Saturday 3 after passover [John xv. 17-xvi. 2].
 28. Feast of apostle Procorius, and Nicondrus, of the seventy. Gospel, 18 in Tishrîn 1 [Luke x. 16-21].
 29. Feast of Callinicus and [female] Saint Theodotis. Gospel, 15 in Ilûl [Matt. x. 16-22].
 30. Feast of Apostle Silv[anus] and the martyr Antonius, and John the soldier. Gospel, 18 in Tishrîn 1 [Luke x. 16-21].
 31. Feast of the martyr Gelasius, and dedication *εγκαίνια* of the temple of the mother of God. Gospel, in Saturday 5 after passover [John x. 27-38], latter half. For the martyr, see in Saturday 17, from Luke [Luke xx. 46-xxi. 4].

Month Ab [August]. Days in it, 31.

1. Feast of the Maccabees, Shemonith and her seven sons. Gospel, 15 in Ilûl [Matt. x. 16-22].
 2. Translation of the body of the chief of deacons and martyr Stephen, and Maria of the washing. Gospel, 20 in Ilûl [*hiat* MS. at that place].
 Fol. 94. a. 1. 3. Feast of Saint Dalmatus, and Faustus, Giro, Isaac, and their pious fellows. Gospel, 5 in Canûn 1 [Matt. xi. 27-30].
 4. Feast of the martyr Eudocia. Gospel, in Saturday 17 in Ilûl [probably *error for* from Luke: Luke xx. 46-xxi. 4. At 17 Ilûl, also, *hiat* MS.].
 5. Feast of Saint Eusignius. Gospel, 4 in Ilûl [Luke x. 1-12].
 6. Transfiguration (*lit.*, Revelation) of our Lord on the Mount of Thabor. Stichon of matins: Tabor and Hermon shall rejoice in thy name [Psa. lxxxix. 12]. Section (or, Verse): I will sing of the mercies of the Lord for ever [Psa. lxxxix. 1]. Gospel, from Luke: Luke ix. 28-36. [Fol. 94. a. 2.] Gospel of priestly ministration, from Matthew: Matt. xvii. 1-19.
 Fol. 94. b. 1. 7. Feast of Saint Domit[ianus?], martyr and monk. Seek in Sunday 3 of the fast [Mark viii. 34-ix. 1].
 8. Feast of chief priest Constantinius [*sic*], and, again, Cosinus, and Moses in the wilderness. See 2 in Ilûl [Matt. v. 14-19].
 9. Apostle Matthias. See in Saturday 7, from Luke ix. 1-6].
 10. Feast of the saint and martyr Laurentius, and martyr Mar Mama. Gospel, Saturday 10 from Luke [Luke x. 16-21].

- Fol. 94. b. 1. 11. Feast of the martyr Aplopolitus and the rest of his. Gospel, 20 in Ilâl [*hiat* MS. at that place].
- Fol. 94. b. 2. 12. Feast of martyr Neophytus and Nicita. Gospel, 9 in Adar [Matt. xx. 1-16].
13. Feast of the pious and confessor Maximus. Gospel, 20 in Tishrîn 1 [John xv. 17-xvi. 2].
14. Feast of Micha the prophet. Gospel, 5 in Ilâl [Luke iv. 22-30; or Matt. xxiii. 29-36].
15. Feast of the mother of God. Consecutive (*akoulouthia*) of matins, and of priestly ministration, 8 in Ilâl [Luke i. 39-56; and x. 38-42; xi. 27, 28].
16. Feast of pious Dimidius that was a monk in Constantinople; and with them the earthquake. Gospel, 23 in Canûn 2 [John xii. 24-36]. Latter, Saturday 3 after passover [John xv. 17-xvi. 2].
17. Feast of Saint Mironus. Gospel, 15 in Ilâl [Matt. x. 16-22].
18. Feast of the martyr sisters, Maphlurus and Laurus. Gospel, 25 in Tishrîn [Luke xii. 2-12].
19. Feast of the martyr soldiers, Andrew and his fellows, 2 thousand and nine hundred and ninety and five. Gospel, 20 in Ilâl [*hiat* MS. at that place].
20. Feast of apostle Thaddeus and the prophet Samuel. Gospel, 1 in Tishrîn 2 [Matt. x. 1-8].
21. Feast of Saint Phasis, martyr, and her three daughters. Gospel, in Saturday 17, from Matthew [Matt. xxv. 1-13].
22. Feast of the martyr Gathunicus (i. e. Agathonicus) and his fellows. Gospel, in Saturday 3 after passover [John xv. 17-xvi. 2].
23. Feast of the martyr Lupus and the martyr Callinicus. Gospel, 15 in Ilâl [Matt. x. 16-22].
- Fol. 95. a. 1. 24. Feast of Saint Euthusimus, disciple of John the apostle. Gospel, 15 in Ilâl [Matt. x. 16-22].
25. Feast of the apostle Titus, and translation of the body of the apostle Saint Bartholomew. Gospel, 18 in Tishrîn 1 [Matt. x. 1-8].
26. Feast of the martyrs Andrianus and Datulia his wife, and his fellows. Gospel, 2 in Ilâl [Matt. v. 14-19].
27. Feast of pious Mar Saba in 'Anthel and Abapumîn. And in this day, the usually celebrated Syrian [lesson] for Mar Simeon Stylites. Gospel, 5 in Canûn 1 [Matt. xi. 27-30].
28. Feast of pious Moses the Ethiopian. Gospel, 21 in Tishrîn 1 [Luke vi. 17-23].
29. Beheading of Mar John the Baptist. Stichon before Gospel of matins: I would fly, I would rest far away, I would fly, and I would dwell in the wilderness [Psa. lv. 6, 7]. Section [or, Verse]: Give ear to

Fol. 95. a. 1. my prayer, O God, and hide not thyself from my supplication [Psa. lv. 1]. Gospel, from Matthew: Matt. xiv. 1-12. [Fol. 95. a. 2.] And in priestly ministration, Gospel from Mark: Mark vi. 14-27. [Here the lesson breaks off at the end of the leaf; the last two leaves of the MS. being missing.]

The lessons missing from the manuscript in its present state are the following:

In the Lectionary: from the beginning, the lessons for Easter and the day following, and five verses of the third day; the last four verses from first Saturday after Easter; all of the following Sunday; matter from the lessons of the eve of Good Friday occupying two leaves, probably Matt. xxvi. 21-39; Luke xxii. 43, 44; Matt. xxvi. 40-43. The Lectionary is thus nearly complete.

In the Menology the gaps are more noticeable, and not easy to supply. They are: Ilâl (Sept.) 17 to latter portion of Tishrîn 2 (Oct.) 1; latter portion of 1 Canûn (Dec.) 18 to latter portion of 2 Canûn (Jan.) 3; Heziran (June) 21, by error of the scribe; Ab (August), latter part of 29 to the end. Lessons, or parts of lessons, are missing for 36 days of the Menology.

The Scripture passages now present in the MS., except the catch-words inserted for reference, are the following:

Matthew i. 1-25; iii. 13-17; iv. 1-25; v. 1-48; vi. 1-33; vii. 1-11, 24-29; viii. 1-34; ix. 1-13, 18-35; x. 1-8, 16-22, 32, 33, 37-42; xi. 1-15, 27-30; xii. 30-37; xiii. 45-54; xiv. 1-12, 14-34; xv. 21-39; xvi. 13-19, 20; xvii. 1-27; xviii. 1-4, 10-20, 23-35; xix. 3-12, 16-30; xx. 1-16, 29-34; xxi. 1-11, 15-43; xxii. 1-46; xxiii. 1-39; xxiv. 1-51; xxv. 1-46; xxvi. 1, 2, 6-16, 44-75; xxvii. 1-66; xxviii. 1-15.

Mark i. 9-11, 35-44; ii. 1-12, 14-17, 23-45; iii. 1-5; v. 24-28; vi. 14-27; vii. 31-37; viii. 27-31, 34-38; ix. 1, 17-31; x. 32-45; xi. 1-11, 22-26; xv. 16-41, 43-47; xvi. 1-20.

Luke i. 1-68, 76-80; ii. 22-40; iii. 1-22; iv. 1-13, 16-41; v. 1-11, 17-32; vi. 1-10, 17-23, 31-36; vii. 1-23, 36-48; viii. 5-21, 26-39, 41-56; ix. 1-6, 28-43, 57-62; x. 1-12, 16-21, 25-42; xi. 27, 28; xii. 2-12, 16-21, 32-40; xiii. 10-17, 19-29; xiv. 1-11, 16-24; xv. 2-32; xvi. 10-31; xvii. 3-10, 12-19; xviii. 9-14, 18-27, 35-43; xix. 1-10, 28-40; xx. 1-8, 46, 47; xxi. 1-4, 8, 9, 25-27, 33-36; xxii. 1-39; xxiii. 32-49; xxiv. 1-12, 18-53.

John i. 29-51; iii. 1-28; iv. 46-54; v. 1-15, 17-47; vi. 1, 2, 5-33, 35-44, 47-59; vii. 1-30, 37-52; viii. 12-59; ix. 1-41; x. 1-9, 17-42; xi. 1-45, 47-54; xii. 1-50; xiii. 1-8, 31-38; xiv. 1-31; xv. 1-27; xvi. 1-33; xvii. 1-26; xviii. 1-40; xix. 1-42; xx. 1-18; xxi. 1-25.

The following passages occur twice: Matt. vii. 8; viii. 23; ix. 1; x. 37-39; xi. 15; xvii. 14-19; xxi. 33-42; xxii. 2-46; xxiii. 1-12; xxiv. 1-13, 34-44; xxv. 1-29, 31-46; xxvi. 57-75; xxvii. 3-56. Mark xv. 43-47. Luke i. 24, 25; iv. 22; xx. 1-8; xxi. 1-4; xxiii. 39-43. John iii. 13-17; v. 30; vi. 14, 27; viii. 12, 42-51; x. 27,

28; xi. 53; xii. 17, 18, 19-23, 37-47; xiv. 1-21, 27-31; xv. 1-7, 17-27; xvi. 1-13, 15-33; xvii. 1-13, 18-26; xviii. 1, 28; xix. 6-16, 23-25; xxi. 14, 24.

The following passages occur three times: Matt. xxii. 15-22, 35-46; xxvii. 33-54. John xii. 24-35; xiv. 10, 11; xvi. 2, 23; xix. 25-30.

The following passages occur four times: John xii. 37; xix. 31-37.

ARTICLE X.

THE UNAUGMENTED VERB-FORMS OF THE RIG- AND ATHARVA-VEDAS.

BY JOHN AVERY,
PROFESSOR IN BOWDOIN COLLEGE, BRUNSWICK, ME.

Presented to the Society May 7th, 1884.

It is well known that the most ancient form of Sanskrit speech, like the earliest dialect of Greek, often omitted the augment in the past tenses of the verb. This usage is most common in the Rig-Veda; is less so in the Atharva-Veda; is rare in the Brāhmaṇas; and has disappeared from the later language, except in some aorist-forms after the prohibitive *mā*, and in a few other sporadic instances. It appears, moreover, that these abbreviated forms have in great part undergone a change in sense; that, while some retain the proper signification of their several tenses, a large number have in some way come to have a, for the most part, indefinite present or "tenseless" meaning—being often coördinate with true present-indicative forms—or have acquired a modal sense, and are employed in all situations where a true subjunctive, optative, or imperative form might have occurred.

So far as I am aware, no one has hitherto collected all occurrences of these forms and classified them according to their several uses. This is the task which is set for the following pages—one which can be brought to only an approximately certain conclusion, as will presently be explained. The search has been limited to the Rig- and Atharva-Vedas, since in these works the great body of such forms occur. I have looked through the text of the former, checking my results by Grass-

mann's Glossary; and have used for the latter Professor Whitney's *Index Verborum*.

The inquiry will relate to the following points:—1. What is the relative frequency of augmentless forms in the different tense-systems; 2. How many have a non-modal sense, and what is the actual tense-use—present, preterit, or aorist—of these; 3. Of forms having a modal sense, how many are used subjunctively and how many optatively.

I shall thus confine myself to a statement of the actual use of these forms, so far as that is discoverable, leaving for the present almost untouched the more difficult question, how this use came about.

Before taking up the main theme of the paper, one or two preliminary remarks will be in place. First, on account of the fragmentary condition in which some verbs have survived in the oldest texts, there is a certain number of forms which it is impossible to assign with entire confidence to a particular tense. This is especially true where the formal distinction between tenses is slight and not in every case consistently maintained. Such closely allied formations are the root-aorist and the root-class of the present-system, the *a*-aorist and the accented *ā*-class, and the reduplicated stems of the present, perfect, and aorist systems. Since this difficulty has been referred to, with illustrative examples, by Delbrück in his *Das Altindische Verbum*, it is unnecessary to dwell on it here, only to say that I have followed Whitney's grammar in distributing doubtful forms among the several tenses; and further, that, considering our scanty, and for the most part conjectural, knowledge of the earliest history of the Old-Indian verb, the distinction of preterit and aorist must in case of some verbs be provisional, and founded on general analogies of structure rather than on actual difference of signification. It seems, indeed, *a priori* not unreasonable to suppose that in texts like the ones under consideration, whose material must have slowly grown up during many centuries, and at a period in Aryan society when the formative processes of the language were especially active, the same verbal form may represent more than one stage of development—that *adāt*, for example, might stand in an early hymn for an indefinite past or "imperfect," in contrast with a real or hypothetical present *dāti*, and in a later hymn for a past near at hand, or "aorist," in contrast with a later developed *adadāt*. It may not be possible to make the case out clearly, on account of the difficulty of fixing the chronological order of the hymns; but, unless some such state of things exists, I cannot understand the frequent inconsistencies of the poets in the choice of tenses. This suggests the importance of judging of the tense-use of each verbal form from its immediate context

rather than from its assumed relation to a general system of tense-significations.

Secondly, a similar doubt may arise in connection with mode-forms. This occurs when the mode-sign of the subjunctive disappears in a long root- or stem-vowel, as in the 2d and 3d sing. act. of the *nā*-class; so in the root-aorist, if *sthāti*, *dāti*, and the like, are true subjunctives with primary endings, can we be sure that *sthāt* and *dāt* were not regarded as the same with secondary endings, even though *asthāt* and *adāt* occur? It appears, indeed, that final radical *ā* is sometimes dropped before the modal *a*, leaving *dada*, *dadha*, etc., as the subjunctive stem; still, such forms as *adas*, *adat*, *adanta* are not wanting. Thirdly, some augmentless forms of the *a*-aorist are not clearly distinguishable from true subjunctives of the root-aorist. A prominent example is *bhūvan* etc.; so, too, *āranta* might be true subjunctive to *ārata*, 3 pl. of the root-form, or augmentless indicative after the pattern of stems like *āran* of the *ā*-form, if regard were had to structure alone. Fourthly, there are a few so-called pluperfect stems ending in *a*, which, when augmentless, are not to be distinguished from true perfect subjunctives. Finally, a part of the imperative inflection is identical with augmentless preteritive forms; though here the accent sometimes furnishes a probable ground for discrimination.

Besides these classes of forms, there are others of a more exceptional character, which likewise cause perplexity. Such are: *āpam* etc., whose initial *ā* gives no evidence of the presence or absence of the augment; *adat*, from *ad*, whose ultimate *a* may be a mode-sign, or an insertion, as allowed by the grammarians, to preserve the ending; *asan*, whose last *a* may be modal or a part of the ending, as in *āsan*; and *īcata*, 3d sing., which occurs only after *mā* or *mākis*. Professor Whitney cites it as a true subjunctive, and would make it the only instance, perhaps, of such a form with the prohibitive particle. Rather than assume this exception, I have preferred to regard it as one of the not infrequent cases of transfer from the root- to the *a*-class, and have therefore admitted it as an augmentless form.

These remarks are enough to show that the number of forms which should be considered augmentless cannot be stated with absolute precision; but, happily, the doubtful cases are a small minority of the whole, and cannot materially affect the result. Moreover, the number is considerably diminished, 1st, by the fact that when such occur after the prohibitive *mā* it may be fairly assumed that they are not true subjunctives; and, 2d, by coördination with a verb in the indicative mode, or by the general requirements of the sense.

We may now proceed to the first point of our inquiry, which relates to the relative frequency of augmentless forms in the sev-

eral tense-systems. The whole number of such forms which I have noted in the two Vedas is 2511, of which 2036 occur in the Rik and 475 in the Atharvan. The total occurrences of augmented forms in the Rig-Veda, as stated in my *History of Verb-Inflection in Sanskrit*, are about 3300, of which 2065 are counted with the imperfect, and 1194 with the aorists. In the Atharva-Veda, augmented forms occur about 1447 times; so that, comparing the latter with the former statements, we find that in the Rig-Veda unaugmented forms are to augmented ones about as 1 to 1.62 and in the Atharva-Veda as 1 to 3.05—a marked decrease in frequency for the later text. Of augmentless forms in RV., 870, or about 42.7 per cent. of the whole, are found in the present system (counting both primitive and derivative conjugations); 28, or 1.4 per cent., are classed more or less confidently with the perfect-system; and 1138, or 55.9 per cent., are distributed among the several stems of the aorist. Not only does the aorist as a whole claim more than half of the augmentless forms, but the root-aorist stands foremost, with 487, or 42.8 per cent. of the occurrences. Next comes the *a*-aorist, with 322, or 28.3 per cent.; the *iṣ*-aorist, with 164, or 14.4 per cent.; the reduplicated aorist, with 119, or 10.5 per cent.; the *s*-aorist, with 37, or 3.2 per cent.; and the *sa*-aorist, with 9, or .8 per cent. The *siṣ*-aorist is unrepresented in the Rig-Veda. The case is quite different in the Atharva-Veda; for, while in RV. nearly half of the augmentless forms occur in the present-system, in AV. there is a marked tendency to confine them to the aorist, where they stand to those in the present-system numerically as 4 to 1—a fact prophetic of the later usage. The specifications are as follows: the present-system has 92 occurrences, or 19.4 per cent. of the whole number; the perfect-system has 1 instance; and the aorist has the remaining 382 cases, or 80.6 per cent. of all. In the distribution of these forms among the aorist-stems, AV. does not differ markedly from RV. The root-form leads off, with 135, or 35.3 per cent. of aorist occurrences. The *a*-form draws a little nearer, with 95 occurrences, or 24.9 per cent. Next follow in order the *iṣ* form with 68 instances, the *s*-form with 41, the reduplicated form with 22, the *siṣ*-form with 14, and the *sa*-form with 7.

The second part of our task was to separate augmentless forms into two grand divisions: the first to include those having a non-modal (indicative) sense, and the second those having a modal (subjunctive or optative) sense. We were further to inquire into the actual tense-use of those grouped in the first division. Here we are confronted at the outset with the question of interpretation. We hardly need to be reminded that there are still many dark verses that baffle the translators, in these ancient texts; and further, that the employment of mode and tense presents so many irregularities that one is often puzzled to know what rational principle governed their choice. One needs only to compare at random pages of the two complete translations of the Rig-Veda to appreciate the difficulty. I have constantly had before me the

renderings of Grassmann and Ludwig; though I have followed neither exclusively, but have endeavored to form an independent judgment, aided by the best light obtainable. Of course I do not expect that everyone will accept my understanding of each of the more than twenty-five hundred cases under consideration; but I trust that the difference of opinion will not be so great as to prevent substantial agreement in the results. At any rate, the whole material is spread before the reader, and he can modify the conclusions to suit his own views.

Turning first to the Rig-Veda, we find, as I think, that, as regards signification, the augmentless forms are divided about equally between a non-modal and a modal use. The figures are, 1027 to the former and 1009 to the latter. Of the former, a little more than half, or 554 instances, occur in the present-system, 17 in the perfect-system, and the remaining 456 in the aorist, of which 351 (235 + 116) occur in the simple-aorist, to 105 for all the forms of the sibilant-aorist.

The loss of so important a factor of tense-expression as the augment naturally led to inexactness of tense-use; and we find, in fact, that the great body of non-modally-used forms are divided, as to time, between an indefinite present and an indefinite past. I have reckoned 368 instances with the former, and 567 with the latter. These are distributed among the tense-systems in about the usual proportion. A past near at hand, or aorist, has been observed 92 times only, of which about five-sixths occur in the aorist-system. The distinction between the aorist and the imperfect sense cannot be certainly applied in every case, and there are passages where either would about equally suit the connection. The indefinite present is employed in the statement of general facts unrestricted as to time—such as the attributes of deities, their personal appearance, or their oft-recurring exploits. A true present indicative often occurs coördinated with such forms. A few examples, out of a large number, will illustrate this usage: RV. viii. 68. 2. "He clothes (*abhy ūnoti*) the naked, heals (*bhīṣákti*) the wounded; the blind sees (*prá khyat*), the lame goes about (*nír bhūt*);" x. 10. 2. "Thy friend desires (*vastī*) not that friendship . . . ; the sons of the great Asura, the heroes who support Heaven, see far around (*pári khyan*);" x. 80. 1. "Agni gives (*dadāti*) the booty-winning steed . . . ; Agni wanders (*carat*) here and there adorning the two worlds;" Vāl. 2. 8. "Thy chariot-horses . . . with which thou dost strike down (*nighośáyas*) the enemy of man, with which thou dost ride around (*parīyase*) the heavens;" ix. 74. 1. "When born in the wood, he cries out (*cakradat*) like an infant, when he, the ruddy steed, is striving to reach (*sisāsati*) the light." One may see, further, RV. i. 87. 3; 132. 5; 152. 3; 169. 3; 175. 3. ii. 19. 4. iii. 16. 2. vii. 32. 21. viii. 2. 39. x. 4. 5; 80. 2; 123. 1.

The use of augmentless forms in a historical sense would call for no special remark, were it not for the tendency to obliterate the distinction of imperfect and aorist. In the following pas-

sages the latter stands for the former, being in most coördinated with that or the perfect: RV. ii. 20. 8. iii. 31. 12. iv. 28. 1. v. 29. 4; 31. 8. viii. 85. 16. x. 46. 2; 73. 2; 123. 4.

As we turn, next, to the Atharva-Veda, we are not surprised to find that the lapse of time has developed still more the tendency of the language to confine the augmentless forms to a modal use; for, instead of a nearly equal division between a non-modal and a modal use, which obtains in the Rik, we find in the Atharvan only 42 instances of the former to 433 of the latter—a ratio of 1 to 10, nearly. Only 13 belong to the present-system; 23 are found in the simple-aorist; and 6 in the sibilant-aorist.

The third, and last, point of our inquiry referred to the second grand division of augmentless forms, or those used in a modal sense. I have attempted to separate subjunctively-used from optatively-used forms, and under the latter head have separately designated forms with *mā*. Under subjunctive uses are placed dependent clauses of purpose or condition, expressions of will (1st person), questions of doubt, and certain occurrences with *na* which seem to approach the future in sense and are best rendered by "shall not" or "cannot." The optative use, including forms with *mā*, expresses a wish, which in the Veda frequently approaches a demand. Since these forms possess no mode-sign, their non-modal or modal sense can only be determined by the context—a coördinate verb or the general sense of the passage; and there are not a few cases where an indicative or a subjunctive, an indicative or an optative would make about equally good sense.

We have seen that augmentless forms occur in a modal sense 1009 times in the Rig-Veda. Of these, 202 are counted with the subjunctive, and 807 with the optative—491 without and 316 with *mā*. The former occurs with about equal frequency in the present- and aorist-systems. The latter use, without *mā*, is more common in the aorist, in about the ratio of 1.51 to 1; and with *mā* the ratio increases to 2.20 to 1. As we have so often noted, the simple-aorist, especially the root-form of it, claims the largest number of occurrences.

Examples of the optative use, with and without *mā*, are too common to need citation. They may occur coördinated with true subjunctives, optatives, or imperatives. The following are a few of the passages where the subjunctive sense occurs in the relations mentioned above: RV. ii. 19. 2. iv. 27. 3. viii. 91. 8. x. 22. 14 (purpose); i. 165. 10. vii. 64. 4; 93. 3. x. 87. 13 (condition); ii. 18. 3. vi. 32. 1. x. 27. 2; 86. 5 (will); iv. 31. 1. vii. 86. 2. x. 28. 5 (question); i. 164. 16. ii. 30. 7. viii. 47. 1; 60. 4 (w. *na*).

Finally, in the Atharva-Veda, 19 of the 433 cases of modally-used augmentless forms have a subjunctive sense, 73 are used optatively without *mā*, and 341 have the same sense with *mā*. Of the last, 48 only are counted with the present-system, and the remaining 293 are found with the aorist. This ratio of about 6 to 1 in favor of the aorist is striking, when we compare it with the corresponding usage in the Rig-Veda.

It only remains to say a few words in explanation of the following List of Forms and Occurrences, in which will be found in detail the facts which have been summarized in the foregoing pages. Under the head "non-modal," occurrences having a present sense are left without special mark; those having a preterite or aorist sense are *followed* by "p" or "a" respectively. So, under the head "modal," an occurrence having a subjunctive sense is followed by "s;" one having an optative sense, by "o." Passages containing *mā* are *preceded* by "w. *mā*."

LIST OF FORMS AND OCCURRENCES.
PRESENT SYSTEM.

	ACTIVE.	
<i>non-modal.</i>		<i>modal.</i>
√ a j: a jat	AV. 3. 8. 4. o.	
añ j: añjan RV. 3. 38. 3. p. 7. 2. 5.		
a d: adat AV. 10. 8. 22.		
a v: ávas	RV. 1. 121. 12. s.	
avatam RV. 7. 83. 1. p.		
1 a q: aqnavam	AV. 19. 55. 6. o.	
2 a q: áqnan RV. 10. 176. 1.		
2 a s: asyat RV. 10. 61. 8. p.		
i: es	w. mā AV. 5. 22. 11.	
ayan RV. 4. 2. 16. p.		
yan RV. 3. 4. 5.		
i n a k s: inakṣat	RV. 1. 132. 6. s.	
2 i s: ichas	w. mā AV. 10. 1. 7.	
u b j: ubjās RV. 4. 19. 5. p.		
u b h: ubhnās RV. 1. 63. 4. p.		
unap (3 s.) RV. 2. 13. 9. p.		
u s: ósas	RV. 1. 175. 3. o.	
uṣṣán RV. 9. 97. 39. p.		
ṛ: ṛṇós RV. 1. 174. 2. p., 9. p. 6. 18.		
5. p.; 20. 12. p.	RV. 1. 30. 14. o., 15. o. 9. 102. 8. o.	
ṛṇvan RV. 1. 69. 10. 7. 1. 2. p.; 5. 6. p.		
ṛ c: árcat RV. 1. 165. 14. a.	RV. 1. 173. 2. o.	
arcan RV. 3. 14. 4. 4. 1. 14. p.	RV. 7. 43. 1. o.	
ṛ s: ársat	RV. 9. 107. 15. o. AV. 10. 4. 1. o.	
1 k ṛ: kṛnavam RV. 10. 49. 1.		
1 k ṛ t: kṛntát RV. 8. 45. 30. p.		
k ṛ s: karṣat RV. 10. 28. 10. 11.		
k r a n d: krándat RV. 1. 36. 8. p. 10. 44. 8. p.	RV. 1. 173. 3. o. 10. 95. 13. s.	
AV. 20. 136. 5. p. (mss. kradat).		
k ṣ a m: kṣāmat (krā-?)	AV. 7. 63. 1. o.	
k ṣ a r: kṣárat RV. 9. 86. 20. a. AV. 5. 1. 3.	RV. 9. 109. 8. o.	
kṣáran RV. 1. 116. 9. p.		

non-modal.	modal.
✓ 1 kṣi: kṣāyas	RV. 3. 8. 1. s. 8. 53. 4. o.
kṣāyat RV. 7. 20. 6.	RV. 8. 58. 11. o. 10. 106. 7. o.
2 kṣi: kṣinām	RV. 10. 27. 4. s.
kṣip: kṣipāt	RV. 4. 27. 3. s. 10. 182. 1-3. o.
khid: khidat RV. 4. 28. 2. p.	
1 gā: jīgāt RV. 9. 71. 5.	
2 gā: gāyat	RV. 1. 167. 6. s.; 173. 1. o.
guh: gūhas	w. mā RV. 7. 100. 6. 10. 27. 24.
grabh: gṛbhās	RV. 3. 30. 5. s.
oakṣ: cakṣus RV. 10. 92. 15. p.	
car: caras	RV. 8. 1. 28. o.
carat RV. 3. 44. 3. 10. 80. 1; 123. 5.	
AV. 13. 2. 40. p.	RV. 1. 173. 3. o.
carata	w. mā RV. 10. 34. 14.
cāran RV. 5. 48. 3.	
cīt: cetat RV. 8. 57. 18.	RV. 1. 164. 16. s. AV. 9. 9. 15. s.
cud: codat	RV. 7. 27. 3. o. AV. 19. 5. 1. o.
cyu: cyāvam	RV. 1. 165. 10. s.
jan: janat RV. 2. 21. 4. p.; 40. 2. p.	RV. 4. 40. 2. o.
ji: jāyat	RV. 10. 43. 5. s.
jin v: jinvan RV. 1. 71. 1. p.	
juṣ: jōṣat	RV. 1. 167. 5. s. 10. 81. 7. o.
takṣ: takṣam	RV. 6. 32. 1. s.
tákṣat RV. 1. 51. 10. p.; 61. 6. p.;	
121. 3. p.; 158. 5. p. 9. 97. 22. p. 10.	
99. 1. p.	RV. 7. 64. 4. s.
tákṣāma RV. 5. 73. 10. a.	
takṣan RV. 1. 20. 3. p.; 111. 1. p.	
5. 31. 4. p.	
tand: tandat	RV. 2. 30. 7. s. (w. na).
tap: tāpas	w. mā AV. 18. 2. 36. s.
tapat	w. mā RV. 1. 162. 20.
tud: tudāt RV. 8. 1. 11. p. 10. 96.	
4. p.	
tṛ: tṛás	RV. 3. 40. 3. o.
tárat RV. 9. 58. 1. p., 2. p., 3. p., 4. p.	RV. 9. 107. 15. o.
tsar: tsárat RV. 1. 71. 5 p. 8. 1. 11. p.	
dabh: dábhat	RV. 1. 178. 2. s. 7. 56. 15. s. 10. 108.
	4. s.
dabhan RV. 1. 148. 5.	w. mā RV. 1. 84. 20. 2. 32. 2. 6. 44.
	12. 8. 45. 23. 10. 87. 9; 120. 4.
	AV. 4. 7. 7. 5. 2. 4. s. 8. 3. 9. s.; 6.
	25. 13. 2. 5. 17. 8. 19. 27. 5. 6;
	46. 2.
dah: dahas	w. mā RV. 10. 16. 1. AV. 18. 2. 4. s.
dā: dadās	w. mā AV. 12. 4. 52.
dādas RV. 8. 59. 14. p.	
dadāt	AV. 11. 1. 27. o.

<i>non-modal.</i>	<i>modal.</i>
√ ī dā : dādat RV. 5. 61. 10. p. 7. 75. 7. 8. 5. 37. p. 10. 85. 41 ^s . p. AV. 14. 2. 4 ^{ss} . p.	RV. 7. 32. 5. s.
dāq : dāqat RV. 2. 19. 4. 6. 16. 20.	RV. 1. 70. 5. s.; 158. 2. s. 4. 2. 9. s. 7. 100. 1. s. 8. 19. 14. s.; 92. 4. s. 10. 61. 25. o.; 65. 6. o.; 91. 11. s.
dās : dāsat	RV. 6. 5. 4. s.
ī dī : dīyat	RV. 1. 180. 1. s.
ādī : dīdāyat RV. 10. 99. 11. p.	
dīdet	RV. 2. 2. 8. o.
dīv : divyas	w. mā RV. 10. 34. 13.
duh : dugdhām	w. mā RV. 1. 158. 4.
duhūs RV. 2. 34. 10. p. 9. 108. 11.	RV. 9. 72. 2. s.
dṛh : dṛhāt RV. 2. 17. 5. p.	
dhanv : dhānvan RV. 1. 135. 9.	RV. 6. 34. 4. s.
ī dhā : dādhan RV. 1. 71. 3. p.	
dhāv : dhāvan RV. 6. 17. 11. p.	
dhi : dīdhyas	w. mā AV. 8. 1. 9.
dhvas : dhvasān RV. Vāl. 7. 5. p.	
nakṣ : nakṣat RV. 1. 121. 3. p. 6. 63. 6. p.	RV. 1. 173. 3. o. 7. 39. 6. o.
nākṣan RV. 7. 23. 4. p. Vāl. 6. 1. p.	
nam : namas	AV. 6. 131. 2. o. 7. 56. 4. o.
ī naq : naqat	AV. 20. 136. 12. o. (not msa.)
nāqan	RV. 9. 79. 1. o.
znāq : nāqat RV. 7. 32. 21. 8. 19. 6.	RV. 1. 41. 5. o.; 164. 22. s. 2. 41. 11. s. 4. 23. 4. s. 6. 2. 5. s. 8. 20. 16. o.; 31. 17. s.; 47. 1. s.; 50. 12. s.; 57. 8. s.; 59. 3. s. AV. 9. 9. 21 ^s . s.
naqan	RV. 2. 35. 6. s. w. mā RV. 2. 23. 8; 27. 14.
nīd (nīnd): nīndata	w. mā RV. 4. 5. 2.
nī : nayas RV. 4. 30. 19. p.	
nayat RV. 3. 9. 5. p.; 31. 6. p. 6. 4. 6. p.	RV. 1. 36. 18. o. 8. 17. 15. o.
pac : pacat RV. 6. 17. 11. p.	
pat : patat RV. 4. 27. 4. p.	
paq : pāqyat AV. 2. 1. 1. p.	RV. 1. 164. 16. s. AV. 9. 9. 15 ^s . s.
pāqyan RV. 1. 174. 6. p.	
apā : pībat RV. 5. 29. 7. p.	RV. 8. 2. 23. o.
pīnv : pīnvat RV. 9. 68. 3. p.	
pīṣ : pīnāk (2 s.) RV. 3. 30. 8. p. 4. 18. 9. p.; 30. 9. p., 13. p. 6. 17. 10. p. 8. 1. 28. p.	
prc : prṇāk (3 s.) RV. 6. 20. 6. p.	
prṇ : prṇat	AV. 7. 57. 1. o.
pyā (pī): pīpayas	RV. 1. 63. 8. o.
pīpes	RV. 4. 16. 21. o.

<i>non-modal.</i>	<i>modal.</i>
√pyā(pī): pipáyat	RV. I. 77. 5. o. 3. 57. 6. s. 8. I. 19. o. 9. 6. 7. s. 10. 133. 7. s. RV. I. 152. 6. o. 7. 65. 2. s.
pipayan	
praoh: prchat RV. 8. 45. 4. p.; 66. I. p.	
pruth: próthat RV. 7. 3. 2.	
budh: bódhat	RV. 4. 15. 7. s.
brū: bruvan AV. 4. 8. 2.	
bhas: bhásat RV. 6. 3. 4.	RV. 6. 14. I. o.
bhid: bhinát (2 s.) RV. I. 54. 4. p.; 130. 7. p.; 174. 8. p.	
bhinát (3 s.) RV. I. 52. 5. p.; 62. 3. p. 2. 11. 20. p.; 15. 8. p. 4. 17. 3. p. 8. 32. 25. p.; 58. 14. p. 10. 68. 11. p.	RV. 8. 1. 8. s.
bhi: bibhes	w. mā AV. 2. 15. 1-6. 5. 30. 8. 8. 2. 23, 24. w. mā AV. 7. 60. 1. w. mā RV. 8. 55. 15. AV. 7. 60. 4, 6. 18. 3. 64.
bibhita	
bibhitana	
bhuj: bhújat RV. I. 100. 14.	
bhū: bhavat	AV. 10. 8. 22. o. 14. 2. 24. o.
bhavan	AV. 20. 130. 19. o.
bhūṣ: bhūṣan	RV. I. 151. 3. o.
bhṛ: bharas RV. 6. 26. 4. 10. 171. 2. bhárat RV. I. 60. 1. p.; 121. 13. p. 2. 20. 6. p. 4. 26. 4-6. p. 5. 44. 13. p. 9. 48. 3. p., 4 p.; 97. 24.	RV. I. 173. 3. o. 2. 19. 5. s. 9. 52. 1. o.; 106. 3. o.
bharan RV. 10. 13. 2. p. AV. 18. 3. 38. p.	
bhraç: bhraṇçat	AV. 20. 133. 6. o.
mad: madas	w. mā AV. 8. 1. 7.
madat	AV. 20. 49. 2. o.
madan RV. 6. 18. 14.	
mand: mándan	RV. 10. 89. 16. s.
mi: minván RV. 3. 31. 12. p.	
mi: minat	RV. 4. 30. 23. s. 7. 32. 5. s. 8. 28. 4. s.
minít	w. mā AV. 6. 110. 3.
minan	RV. 9. 61. 27. s.
2mṛ(mṛp): mṛpat	AV. 9. 2. 14. o.
yam: yamam RV. 10. 49. 3. p.	
yamas	RV. 10. 134. 6. o.
yámat AV. 6. 56. 1. 10. 4. 8.	RV. 5. 34. 2. s.; 46. 5. o. 8. 11. 7. o.; 33. 8. s.; 81. 3. o. 9. 44. 5. o. 10. 14. 14. o. AV. 6. 35. 3. o.
yaman	w. mā RV. 3. 45. 1. 4. 44. 5. 7. 69. 6. 8. 81. 31. AV. 7. 117. 1. s.
yā: yāt	RV. 9. 52. 2. o.

<i>non-modal.</i>	<i>modal.</i>
vyā: yātam	w. mā AV. 11. 2. 1.
yāta	w. mā AV. 6. 73. 3.
2yu: yuyoma	w. mā AV. 7. 68. 3.
rad: rádat RV. 7. 87. 1. p.	
ran: rapat	RV. 8. 82. 20. s.
rápan RV. 4. 33. 7. p.	RV. 5. 53. 16. o. 10. 25. 1. o.
rap: rápat	RV. 1. 174. 7. o. 10. 11. 2. o. AV. 18. 1. 19. o.
rāj: ráṭ (3 s.) RV. 6. 12. 5.	
rādh: rādhat	RV. 1. 120. 1. s.
ric: ripák (3 s.) RV. 2. 15. 8. p.; 19. 5.	
ribh: rébhat RV. 10. 92. 15. p.	
riṣ: reṣat RV. 7. 20. 6.	
ri: ripās	AV. 20. 135. 11. o.
ripán RV. 8. 7. 28. p. 10. 138. 1. p.	
iru: ruvát	RV. 1. 173. 3. o. 4. 56. 1. s.
ruj: rujás RV. 6. 22. 6. p.	
rujāt RV. 6. 32. 2. p.; 39. 2. p. 7. 75. 7.	
rujan RV. 1. 71. 2. p.	
rud: rudan	w. mā AV. 8. 1. 19.
rudh: ródhat RV. 1. 67. 10.	
rej: rejat RV. 4. 17. 2. p.	
likh: likhat	AV. 20. 132. 8. s.
vad: vádat RV. 1. 119. 9. p.	AV. 3. 3. 7. s.
van: vanas	w. mā RV. 8. 45. 23.
vanvan	RV. 7. 48. 3. o.
vap: vapas RV. 4. 16. 13. p.	RV. 8. 85. 9. o.
vam: vaman RV. 10. 108. 8. p.	
ivas: uchat	RV. 1. 48. 8. o. 7. 81. 6. o.
uchánn RV. 7. 90. 4.	
3vas: vasas	RV. 7. 8. 3. s.
vah: váhat RV. 8. 1. 11. p.	AV. 1. 8. 1. o.
ivid: vet (3 s.) RV. 10. 53. 9. p.	
2vid: vindas RV. 10. 104. 8. p.	
vindat RV. 6. 44. 23. p.	
vindan RV. 1. 72. 2. p. 4. 1. 16. p.	
vidh: vidhat RV. 8. 5. 22. p.	
vidhán	RV. 1. 149. 1. o.
viq: viqat RV. 9. 103. 4; 107. 10.	
2viṣ: vivés (2 s.) RV. 1. 69. 8. p. 10. 147. 1. p.	
vivés (3 s.) RV. 10. 76. 3. p.	
2vī: vés (2 s.)	RV. 1. 63. 2. s. 6. 15. 14. s. w. mā
vés (3 s.)	RV. 4. 3. 13.
ivṛ: ūrṇot RV. 1. 68. 1. p.	RV. 1. 77. 2. s.
vṛj: vṛpak (2 s.)	w. mā RV. 8. 86. 7 ² .

<i>non-modal.</i>	<i>modal.</i>
√ vṛj : vṛṇak (3 s.) RV. 6. 18. 8. p. 7. 18. 12. p.	
vṛt : vartat RV. 1. 121. 4. p.	
vṛdh : vārdhas vārdhat	RV. 1. 71. 6. o. RV. 6. 38. 3. o. 7. 68. 9. o. 10. 61. 26. o. RV. 6. 51. 11. o. w. mā RV. 6. 48. 17.
vardhan	
vṛh : vṛhas vṛhat RV. 1. 130. 9. p.	
ven : venas	RV. 1. 43. 9. o. w. mā RV. 5. 31. 2; 36. 4. 6. 44. 10. AV. 4. 8. 2.
venatam	w. mā RV. 5. 75. 7; 78. 1.
vyac : vivyak (3 s.) RV. 7. 21. 6.	
vyadh : vidhyat RV. 1. 61. 7. p.	
vraçc : vṛçcas RV. 4. 17. 7. p. vṛçcāt RV. 1. 61. 10. p. 2. 19. 2. p. 3. 33. 7. p. 5. 29. 6. p.	
çaḥs : çañsata	w. mā RV. 8. 1. 1.
çak : çikṣam çikṣas	RV. 10. 27. 1. s. RV. Vāl. 4. 8. s.
çardh : çardhat	RV. 7. 21. 5. o.
çā(çi) : çiçās RV. 6. 18. 13. p. çyat RV. 1. 130. 4 ² . p.	
çās(çiç) : çaçās (2 s.) RV. 1. 80. 1. p. çāsan RV. 10. 32. 4.	
çuc : çocas	w. mā RV. 10. 16. 1.
çcam : çcāmnan	RV. 1. 104. 2. o.
çrath : çrathnās RV. 10. 171. 3. p.	
sad : sidas RV. 6. 5. 3. a. sīdat RV. 5. 11. 2. p. 6. 16. 23. 10. 46. 6. p.; 61. 9. p.; 123. 5.	RV. 7. 30. 3. o. 8. 61. 2. o. 10. 12. 1. s; 46. 1. o.; 61. 4. s.; 99. 8. s. AV. 18. 1. 29 ² . s.
sīdan RV. 1. 65. 2; 72. 5. p.; 85. 7. p.	
saçc : saçcat RV. 2. 22. 1-3. p.	
sah : sahas RV. 1. 174. 8. p.	
sādh : sādhat RV. 2. 19. 3. p. sādhan RV. 1. 96. 1. p.	
sic : sīcam sīcat RV. 10. 61. 2. p., 7. p.	RV. 10. 27. 2. s. RV. 4. 43. 6. o.
su : sunota	w. mā RV. 2. 30. 7.
sṛj : sṛjās RV. 2. 11. 2. p. 4. 17. 1. p. 5. 32. 1. p. 10. 111. 9. p. sṛjāt RV. 1. 55. 6. p.; 71. 5. p. 4. 27. 3. p. 9. 64. 10. 10. 113. 4. p.; 124. 7. p.	w. mā RV. 1. 189. 5. RV. 1. 174. 4. o. 7. 104. 20. o. AV. 8. 4. 20 ² . o.
sṛp : sarpat RV. 10. 79. 3; 99. 12.	

<i>non-modal.</i>	<i>modal.</i>
√ <i>stan</i> : <i>stan</i> (3 s.) RV. 10. 92. 8.	
<i>stu</i> : <i>stāut</i> RV. 7. 42. 6. a.	
<i>sthā</i> : <i>tiṣṭham</i> RV. 8. 34. 18. p.	
<i>tiṣṭhas</i>	w. mā AV. 8. 1. 9. 10. 1. 26.
<i>tiṣṭhat</i> RV. 1. 118. 5. a. 4. 1. 17. p.	
5. 73. 5. 8. 20. 4; 58. 15. p. 10. 132. 7.	RV. 1. 174. 4. s. 6. 20. 9. o.
<i>tiṣṭhan</i> RV. 10. 123. 3.	
<i>spṛdh</i> : <i>spūrdhān</i>	RV. 6. 67. 9. s.
<i>sphur</i> : <i>sphurat</i>	RV. 1. 84. 8. s.
<i>sridh</i> : <i>sredhata</i>	w. mā RV. 7. 32. 9.
<i>svaj</i> : <i>svājat</i> RV. 6. 60. 10.	
<i>han</i> : <i>hān</i> (2 s.) RV. 5. 32. 1. p. 6.	
18. 5. p.; 20. 2. p., 10. p.; 26. 5. p. 10.	
22. 7. p.	
<i>han</i> (3 s.) RV. 5. 29. 2. p., 4. p. 6.	
27. 5. p.; 47. 2. p. 7. 9. 6. p. 10. 99.	
6. p.	RV. 10. 182. 1-3. o.
<i>hatām</i> RV. 7. 83. 1. p.	
<i>zhā</i> : <i>jahitam</i>	w. mā AV. 7. 53. 2.
<i>hin v</i> : <i>hinvan</i> RV. 10. 96. 7. p.	
<i>hvā</i> (h ā): <i>huvat</i>	RV. 8. 26. 16. o.

MIDDLE.

<i>añj</i> : <i>añjata</i> (3 pl.) RV. 8. 7. 25. p.	
<i>am</i> : <i>āmanta</i>	RV. 1. 189. 3. o.
<i>iradh</i> : <i>iradhanta</i> RV. 1. 129. 2.	
<i>iṣ</i> : <i>iṣanta</i>	RV. 1. 134. 5. o.
<i>ziṣ</i> : <i>ichānta</i> RV. 1. 68. 8. p.	
<i>īḍ</i> : <i>īḍata</i> (3 p.)	RV. 1. 96. 3. o.
<i>īḍ</i> : <i>īḍata</i> (3 s.)	w. mā RV. 1. 23. 9; 36. 16. 2. 23. 10; 42. 3. 6. 28. 7. 7. 94. 7. 8. 48. 14. 10. 25. 7; 36. 2. AV. 4. 21. 7. 19. 47. 6 ³ . 20. 127. 13.
<i>īṣ</i> : <i>iṣanta</i> RV. 8. 85. 3.	
<i>ṛ</i> : <i>ṛṇutā</i> RV. 5. 45. 6. p.	
<i>īkr</i> : <i>kuruthās</i>	w. mā AV. 5. 22. 11.
<i>krṇuta</i> RV. 10. 31. 8, 10. p.; 48. 9. p.	
<i>krṇota</i>	RV. 7. 34. 12. o.
<i>krṇvata</i> RV. 1. 72. 5. p. 4. 24. 3.	RV. 1. 100. 7. o.
<i>krp</i> : <i>krpanta</i> RV. 9. 99. 4.	
<i>guh</i> : <i>gūhathās</i>	w. mā AV. 4. 20. 5.
<i>gr</i> : <i>grānta</i> RV. 8. 3. 7. p.	
<i>grabh</i> : <i>grābhṇta</i> (3 s.)	RV. 9. 106. 3. o.
<i>grābhṇata</i> RV. 9. 14. 7.	
<i>cakṣ</i> : <i>cakṣata</i> (3 s.) RV. 1. 121. 2. p.	
9. 71. 9.	
<i>car</i> : <i>caranta</i> RV. 3. 4. 5.	
<i>cit</i> : <i>oiketa</i>	RV. 9. 102. 4. s. 10. 26. 2. o.

<i>non-modal.</i>	<i>modal.</i>
√cyu: cyavanta RV. 1. 48. 2.	
jan: jāyathās RV. 3. 48. 2. p. 8. 78.	
5. p.	
janata RV. 10. 123. 7. p.	
jāyata RV. 1. 128. 1. p. 4. 1. 11. p.	
jananta RV. 2. 18. 2. 7. 7. 4. p. 9.	
23. 2. p.	
jāyanta RV. 1. 168. 2.	
juṣ: juṣata	RV. 1. 25. 18. o. 5. 13. 3. o. 7. 15. 6. o.
juṣanta RV. 1. 68. 3. p. 9. p.; 167. 4.	
7. 5. 6. p.; 11. 4. p. 8. 13. 29. p. 10.	
8. 3.	RV. 1. 3. 9. o.; 127. 6. o.; 148. 2. o. 2.
	27. 2. o.; 40. 2. o. 5. 41. 2. o.; 46.
	2. o. 6. 16. 8. o.; 52. 11. o. 7. 34.
	25. o.; 35. 14. o.; 52. 3. o.; 56. 20. 8.;
	58. 6. o.; 64. 1. o. 8. 13. 6. s. 9. 81.
	5. o.; 102. 5. s. 10. 70. 8. o.
3jṛ: jaranta RV. 10. 31. 7. a.	
jā: jānata (3 p.) RV. 1. 68. 8. p. 8.	
61. 14.	
takṣ: takṣata (3 p.) RV. 3. 38. 2. p.	
tan: tanuthās	w. mā RV. 5. 79. 9.
tṛ: tirata	RV. 10. 95. 10. o.
tiranta RV. 7. 7. 6.	
dāy: dāyanta RV. 7. 16. 7.	
diṣ: didiṣṭa RV. 10. 93. 15 ² .	
dṛh: dṛhata RV. 5. 45. 2.	
dhi: didhithās	w. mā AV. 8. 1. 8.
nakṣ: nakṣata RV. 1. 33. 14. p. 10.	
74. 2.	
nākṣanta RV. 7. 52. 3. p. 10. 88.	
17. p.	RV. 7. 42. 1. o. 8. 81. 27. o.; 92. 1. o.
nam: namanta RV. 10. 30. 6.	RV. 5. 32. 10. o. 7. 31. 9. o.; 41. 6. o.
	8. 6. 4. o. AV. 3. 16. 6 ² . o.
inaṣ: naṣanta	RV. 9. 79. 1. o. 10. 133. 3. o.
2naṣ: naṣanta RV. 1. 123. 11. a. 10.	
115. 4.	w. mā RV. 7. 1. 22.
nas: nāsanta RV. 4. 58. 8. 8. 61. 14.	
9. 89. 3; 92. 5.	RV. 1. 186. 7. o.
niḥs: niḥsata RV. 10. 74. 2.	
ni: nayanta RV. 10. 4. 5.	RV. 1. 148. 3. o.
inu: nāvanta RV. 1. 66. 10; 69. 10.	
4. 3. 11. p. 5. 45. 8. p. 6. 7. 2. p. 10.	
176. 1. AV. 9. 9. 3.	RV. 7. 42. 1. o. AV. 5. 2. 2. o.
2nu: nāvanta RV. 10. 22. 9.	RV. 9. 88. 2. o.
nud: nudanta RV. 1. 167. 4.	
pan: pánanta RV. 2. 4. 5. p. 10.	
74. 4.	RV. 10. 104. 7. o.

<i>non-modal</i>	<i>modal</i>
√pīn v: pīnvanta RV. 7. 34. 3.	
pyā (pī): pīpayānta RV. 1. 73. 6 p.	RV. 1. 153. 4. o.; 169. 4. o.; 181. 5. o., 6. o. 5. 34. 9. o.
prath: prathanta RV. 9. 94. 2. p.	
pru: pravanta RV. 4. 58. 8.	
bādh: bādhathās	w. mā RV. 10. 18. 11. AV. 18. 3. 50°.
bhāj: bhājanta RV. 8. 4. 21 ² . p. 10.	RV. 1. 68. 4. o. 5. 79. 7. s. 10. 108. 8. s.
15. 3. AV. 18. 1. 45°.	
bhan: bhananta RV. 4. 18. 7. 7. 18.	
7. p.	
bhikṣ: bhikṣanta RV. 3. 56. 7.	
bhur: bhurānta RV. 5. 6. 7.	
bhṛ: bharata RV. 10. 40. 6. p.	
bhāranta RV. 1. 70. 10. 2. 13. 2. 5.	
73. 8. 8. 6. 2. p.	RV. 1. 70. 9. o.
man: manyathās	w. mā RV. 1. 126. 7.
manyata RV. 4. 17. 1. p., 4. p.	
mananta RV. 10. 67. 2. p.	
manvata RV. 4. 1. 16. p. 8. 29. 10. p.	
mṛj: mṛjta RV. 1. 140. 2.	RV. 1. 174. 4. o.
mṛjanta RV. 9. 24. 1; 65. 26.	
yakṣ: yakṣanta RV. 1. 132. 5.	
iyu: yuvanta	RV. 8. 60. 4. s.
2yu: yuyothās	w. mā RV. 2. 33. 1.
yuyota	w. mā RV. 8. 60. 8.
yavanta	RV. 5. 2. 5. s.
yuj: yujanta (3 p.) RV. 6. 66. 6. p.	
8. 20. 4.	
rau: rapanta	RV. 7. 57. 5. o.
ranta (3 p.) RV. 1. 61. 11. p. 7. 39.	
3. p.	
rabh: rabhathās	w. mā AV. 8. 2. 7.
irā: rarithās	w. mā RV. 6. 44. 11.
ruc: rocata RV. 4. 1. 17. p.; 10. 5. 6.	
rej: rejata RV. 4. 17. 2. p.; 22. 4. p.	
5. 60. 3. p.	
rājanta RV. 8. 92. 3.	
vap: vapanta RV. 7. 56. 3.	
2vas: vasta RV. 1. 25. 13.	
vasata (3 p.) RV. 5. 52. 9; 63. 6;	
85. 4.	
ividh: vidhanta	RV. 3. 3. 1. o.
ivṛ: vāraṇta RV. 2. 24. 5. 3. 32.	
9. 16. 4. 6. 6. 5. 55. 7.	RV. 1. 121. 15. o.
2vṛ: varanta	RV. 1. 140. 13. o.
vṛdh: vārdhata	RV. 10. 25. 10. o.; 22. 14. 8.
vardhanta	RV. 5. 19. 3. o.
vṛādh: vrādhanta RV. 5. 6. 7.	

<i>non-modal.</i>	<i>modal.</i>
√ ṣā(ṣṛ): ṣiṣṭā (3 s.) RV. 6. 3. 5.	
ṣuo: ṣóanta	RV. 8. 6. 8. s.
sac: śácata RV. 4. 5. 9. p.	
sacadhvam	w. mā AV. 4. 37. 12.
śácanta RV. 1. 73. 4; 156. 4; 164.	
50. p. 2. 5. 5. 3. 1. 14. p. 5. 17. 5;	
43. 15. 10. 90. 16. p.; 172. 1. AV.	
7. 5. 1. p.	RV. 7. 5. 4. 0.; 74. 5. 0. 10. 111. 7. s.
sap: śapanta RV. 5. 3. 4. p.	
saṣo: śaṣcata (3 p.) RV. 7. 90. 3.	RV. 7. 26. 4. 0.
sādh: śādhata RV. 5. 45. 3. p.	
śādhanta	RV. 8. 40. 9. 0.
sū: śūta RV. 10. 31. 10. p.; 61. 20.	
srj: śrjanta	w. mā AV. 12. 3. 46.
śrjanta RV. 10. 62. 7. p.	
stū: stāvanta RV. 4. 22. 7. p. 7. 30. 4.	
sthā: tīṣṭhanta RV. 1. 135. 8. 10.	
117. 5.	
smi: smayanta RV. 1. 168. 8.	
ihā: jīhīta RV. 1. 37. 7. 5. 43. 3. p.	
2hr: hrīṣṭhās	w. mā RV. 8. 2. 19.
hva(hū): hāvanta RV. 1. 12. 2. 7.	
28. 1. 10. 118. 5.	

PERFECT SYSTEM.

ACTIVE.

ikṛ: cakaram RV. 4. 42. 6. p.	
kṛand: cakradas RV. 9. 107. 22.	RV. 9. 64. 3. 0.
cakradat RV. 8. 7. 26. p. 9. 7. 3;	
74. 1; 86. 31.	
cit: ciketaṁ	RV. 10. 28. 5. s.
dhan: dadhānat RV. 10. 73. 1. p.	
dhr̥ṣ: dadhar̥ṣit	w. mā RV. 1. 183. 4. 4. 4. 3.
nam: nanāmas RV. 1. 174. 8. p.	RV. 2. 19. 7. 0.
vyaç: vivyācat RV. 10. 96. 4. p.	
stabh: tastāmbhat RV. 1. 121. 3. p.	
svar: sasvār (3 s.) RV. 1. 88. 5. p.	
hiñs: jīhiñsis	w. mā AV. 12. 3. 18.
hvr̥: juhuras	w. mā RV. 7. 4. 4.

MIDDLE.

kṛp: cakṛpānta RV. 4. 1. 14. p.	
kram: cakramanta RV. 4. 22. 6. p.	RV. 2. 19. 2. s.
vṛdh: vāvṛdhānta RV. 5. 52. 7. 6.	
66. 2. p. 10. 93. 12. s.	RV. 6. 68. 4. s.
vyaç: vivyacanta RV. 8. 6. 15.	
hvr̥: juhūrthās	w. mā RV. 7. 1. 19.
juhuranta	w. mā RV. 1. 43. 8. 3. 55. 2.

AORIST SYSTEMS.

1. ROOT-AORIST.

<i>non-modal.</i>	ACTIVE.	<i>modal.</i>
✓ īkr̥ : karam RV. 10. 48. 8. p., 9. p.; 49. 8. p.; 85. 25. AV. 1. 3. 1-5. 14. 1. 18°.		
kar (2 s.) RV. 1. 63. 7. p. 5. 29. 5. p. 6. 26. 5. p. 7. 21. 3. p.		RV. 1. 164. 49. o. 6. 44. 18. o. AV. 7. 10. 1. o.—w. mā RV. 2. 18. 4. 3. 33. 8. 7. 22. 6; 43. 3; 75. 8. 8. 45. 31.
kār (3 s.) RV. 1. 61. 11. p.; 71. 5. p.; 72. 1; 174. 7. p. 3. 5. 7; 31. 6. p. 4. 28. 1. p. 5. 29. 4. p. 6. 20. 5. p.; 23. 5. a. 9. 92. 5. 10. 10. 5. p. AV. 18. 1. 5°. p.		RV. 1. 186. 5. o. 4. 21. 10. o.—w. mā 4. 18. 1. w. mā AV. 11. 2. 2. RV. 2. 23. 12. o.—w. mā RV. 6. 51. 7. 7. 52. 2; 60. 8. AV. 14. 1. 32. o. 19. 20. 4. o.—w. mā AV. 7. 82. 3. 8. 6. 25.
kārtam karma RV. 1. 173. 4. a.		
kran		
krand : kran (2 s.) RV. 7. 5. 7.		
kramus		w. mā RV. 7. 32. 27.
gam : gamam		w. mā RV. 7. 89. 1.
gan (3 s.) AV. 3. 4. 1. a.		w. mā RV. 7. 50. 1.
ganma		w. mā RV. 2. 28. 7. 6. 61. 14.
gāntā RV. 1. 38. 2.		
gantana		w. mā RV. 7. 59. 5.
gmán RV. 1. 65. 1. 3. 38. 2. a.; 39. 5. p. 4. 43. 6. 6. 1. 2. 3. 10. 29. 5.; 46. 2. p; 123. 4. p.		RV. 3. 54. 14. o. 4. 34. 5. o. 5. 33. 10. o.; 49. 4. o. w. mā RV. 10. 128. 4. AV. 5. 3. 4°.
igā : gām		RV. 1. 67. 6. o. 4. 16. 9. o. 7. 62. 2. o. 10. 56. 3. o.—w. mā RV. 3. 53. 2. 4. 3. 13. 10. 108. 9. AV. 5. 30. 1°, 6; 19. 9. 8. 1. 7, 10; 2. 1. 12. 2. 10. 19. 27. 8.
gās RV. 10. 1. 2.		
gāt RV. 1. 104. 5. p. 2. 38. 8. 3. 31. 1. p., 6. p., 21. p. 5. 45. 1. a., 2. 7. 67. 8; 69. 4. 10. 5. 6. p. AV. 5. 1. 6°. p.		RV. 1. 38. 5. o.; 164. 4. s.; 167. 5. o. 2. 33. 14. o.; 38. 11. o. 7. 3. 9. s. AV. 9. 9. 4°. s.—w. mā RV. 8. 5. 39. 10. 18. 4. AV. 5. 30. 14. 7. 53. 4. 8. 1. 7, 18. 12. 2. 23°; 3. 46. 16. 4. 3.

non-modal.	modal.
√ igā : gātām gātām gāma gāta gūs RV. 1. 65. 3; 104. 2. 3. 7. 7. 5. 45. 1. a. 10. 12. 3. AV. 18. 1. 32°.	w. mā AV. 3. 11. 6. w mā AV. 12. 3. 14. w. mā RV. 10. 57. 1. AV. 13. 1. 59°. w. mā RV. 10. 19. 1. AV. 7. 60. 7. RV. 4. 37. 2. o. 7. 93. 3. s. AV. 5. 1. 4. s.—w. mā RV. 1. 120. 8. 7. 21. 5. AV. 5. 8. 3. 18. 3. 62. 19. 15. 2. w. mā RV. 10. 95. 15. w. mā RV. 1. 109. 3. w. mā RV. 1. 178. 1. 6. 61. 14. w. mā RV. 2. 11. 21. 7. 1. 21. w. mā RV. 1. 183. 4. w. mā RV. 7. 56. 21. RV. 10. 61. 20 s.
ghas : kṣan chid : chedma dagh : dhak (2 s.) dhak (3 s.) dhaktam daghma dan : dan dabh : dabhús RV. 3. 16. 2. 6. 46. 10. idā : dām RV. 10. 49. 1. dās RV. 1. 121. 4. 6. 20. 7. p.	RV. 1. 169. 4. o. 2. 2. 7°. o.; 4. 8. o. 3. 24. 5. o. 5. 33. 6. o. 6. 13. 6. o.; 19. 6. o.; 26. 1. o.; 33. 1. o.; 35. 1. s. 7. 1. 5. o.; 100. 2. o. 9. 97. 25. o. 10. 30. 4. o.; 47. 1-8. o.; 85. 38. o.; 148. 4. o. AV. 2. 6. 5. o.; 17. 1-7. o.; 18. 1-5. o. 3. 12. 5. o. 14. 1. 37. o.; 2. 1°. o.—w. mā RV. 1. 104. 5. 7, 8; 189. 5. 7. 1. 19; 46. 4. 8. 2. 15; 48. 8; 60. 7. 10. 59. 4; 128. 8. AV. 5. 3. 8. RV. 1. 24. 1. s., 2. o. 5. 3. 12. s. 7. 97. 4. o. 9. 97. 52. o. 10. 17. 7. o.; 80. 4. o. AV. 18. 1. 41°. o. RV. 10. 161. 4. o. AV. 6. 111. 4°. o. RV. 1. 25. 18°. o. RV. 1. 26. 10. o.; 48. 12. o.; 54. 11°. o.; 61. 16. o.; 171. 5. o. 2. 4. 9. o. 3. 8. 3. o.; 17. 5. o.; 24. 1. o.; 28. 5. o.; 29. 8. o.; 31. 19. o.; 36. 1. o., 10. o.; 51. 6. o.; 56. 6. o. 4. 6. 11. o.; 17. 18. o.; 32. 12. o. 5. 7. 9. o.; 36.
dāt RV. 1. 121. 12. p. 6. 63. 9. a., 10°. a. 7. 45. 2. 8. 2. 39; 32. 15. dūs RV. 1. 127. 4. 5. 49. 5. 8. 3. 21. a. idṛ : dārt (2 s.) RV. 1. 174. 2. p. 6. 20. 10. p. dārt (3 s.) RV. 6. 27. 5. p. dṛṇ : dārṇam idhā : dhām AV. 7. 97. 8. a. dhās RV. 1. 63. 1. p.; 72. 7. p. 3. 30. 3. p. 5. 32. 5. p. 8. 85. 16. p.	

non-modal.

✓ **i dhā: dhāt** RV. 1. 63. 2; 67. 3; 71.

5. p. 6. 3. 5; 19. 2; 30. 2. 10. 132. 5.

dhātām

dhūs RV. 1. 73. 7. a. 2. 4. 3. a.; 20.

8. p. 3. 38. 3. p. 4. 33. 11. a. 5.

58. 7. 7. 40. 4. a.; 85. 3. 10. 46. 5;

49. 2. a.; 74. 1.

2 naq: nak (3 s.)

naṭ (3 s.)

nṛt nṛtus RV. 5. 52. 12. a.

1 pā: pāt

2 pā: pās

prā: prās RV. 6. 46. 5. a.

bhid: bhet (2 s.) RV. 7. 18. 20. p.

bhét (3 s.) RV. 1. 59. 6. p. 10. 68.

6. p.

bhi: bhema

bhuḥ: bhojam

bhū: bhūs RV. 1. 52. 13; 91. 2; 189.

7. 6. 1. 5; 20. 11. p.; 64. 5. 7. 21. 6.

AV. 6. 98. 2.

bhūt RV. 1. 71. 4. p.; 73. 2; 77. 3;

100. 4; 116. 6; 173. 8. 2. 4. 1. 5;

18. 1; 19. 4. 3. 32. 11. p., 12. p.; 36.

1. 4. 17. 4. p.; 19. 9. p.; 25. 7; 43.

4. a. 6. 4. 2; 18. 8, 13; 19. 1; 29. 4;

30. 2; 34. 2; 61. 10, 12. 7. 20. 2; 62.

1; 68. 6. p.; 100. 6. p. 8. 2. 37; 60.

11; 68. 2. 10. 23. 1; 29. 3; 48. 9;

99. 3, 11. p.; 100. 6; 105. 10. p.

modal.

5. 0.; 79. 6. 0.; 83. 7. 0. 6. 4. 4. 0.;

10. 6. 0.; 13. 5. 0.; 19. 10. 0.; 40. 1.

0.; 47. 9. 0., 30. 0. 7. 20. 10. 0.; 24.

5. 0; 77. 6. 0.; 79. 5. 0. 9. 8. 8. 0.;

90. 6. 0. 10. 46. 10. 0.; 69. 3. 0. AV.

5. 25. 7. 0. 7. 115. 2. 0.

RV. 1. 107. 3. 0. 3. 31. 13. 8.; 54. 12.

0. 4. 17. 13. 0.; 24. 2. 0. 6. 4. 2. 0.;

40. 4. 0.; 49. 7. 0., 14. 0. 10. 30. 12.

0.; 68. 12. 0. AV. 2. 10. 3. 0.; 29.

1. 0. 6. 61. 1. 0. 13. 1. 20. 0. 16.

9. 2. 0. 18. 3. 63. 0.; 4. 54. 0.—w.

mā RV. 5. 41. 16; 42. 16; 43. 15.

7. 34. 17; 38. 3.

w. **mā** RV. 1. 120. 8.

RV. 4. 6. 6. 8. 5. 41. 6. 0. 7. 34. 18.

0.; 36. 9. 0.

w. **mā** RV. 1. 18. 3. 2. 23. 12. 7. 56.

9; 94. 8.

w. **mā** RV. 7. 104. 23. AV. 8. 4. 23.

RV. 4. 55. 5. 0. 8. 31. 2. 0.

RV. 4. 20. 4. 0.

w. **mā** RV. 1. 104. 8².

w. **mā** RV. 1. 11. 2. 8. 4. 7.

w. **mā** RV. 2. 28. 9.

RV. 1. 178. 5. 0. 6. 15. 3. 0., 14. 8.;

33. 4. 0. 7. 19. 10. 0. 10. 46. 5. 0.—

w. **mā** RV. 1. 33. 3. 10. 11. 9. AV.

18. 1. 25⁺.

RV. 1. 63. 6. 0.; 178. 3. 8., 4. 0. 3.

non-modal.

modal.

√bhū: bhūma

bhūta

bhūtana

bhūvan RV. 6. 66. 1.

yam: yamus RV. 5. 61. 3. a.

yuj: yojam

ivṛ: vam RV. 10. 28. 7. p.

vár (2 s.) RV. 1. 62. 5. p. 5. 32. 1. p.

vár (3 s.) RV. 1. 121. 4. p. 2. 14. 3. p.

vrán RV. 4. 2. 16. p.; 55. 6. a. 5. 29. 12. AV. 18. 3. 21^o. p.

vṛj: vārk (2 s.) RV. 1. 63. 7. p. 6. 26. 3. p.

vark (3 s.) RV. 10. 8. 9. p.

varktam

qri: qret RV. 1. 174. 7. p.

sā: sāt RV. 5. 45. 2.

skand: skán (3 s.) RV. 10. 61. 7. p.

stṛ: star (2 s.)

sthā: sthām

sthās RV. 4. 30. 12. p.

sthāt RV. 1. 68. 1. p. 2. 15. 7. p. 7. 87. 6. a.

sthātam

sthāta

sthus RV. 1. 24. 7; 167. 9. 5. 15. 3. 7. 18. 3. a.

spṛ: spar

hva(hū): hóma RV. 1. 9. 9.

53. 3. 0. 5. 41. 16. 0. 6. 67. 8. 8. 10. 3. 2. 8.; 4. 7. 0.; 105. 9. 8. — w. mā RV. 1. 138. 5. 2. 29. 4. 7. 104. 7. AV. 5. 11. 7. 7. 35. 3; 108. 1. 8. 1. 7; 4. 7^o.

w. mā RV. 1. 105. 3. 7. 19. 7; 46. 4; 57. 4; 62. 4. 8. 1. 13. 10. 37. 6. AV. 7. 20. 3.

w. mā RV. 4. 35. 1.

w. mā RV. 7. 59. 10.

w. mā RV. 1. 139. 8. 10. 22. 12.

RV. 2. 18. 3. 8.

RV. 1. 63. 5. 0.

AV. 4. 1. 1. 0.

RV. 4. 5. 8. 8.

w. mā RV. 8. 64. 12.

w. mā RV. 1. 183. 4. 6. 59. 7.

RV. 7. 28. 4. 0.

w. mā RV. 8. 3. 2.

w. mā RV. 2. 27. 17.

RV. 6. 24. 9. 0. — w. mā AV. 5. 7. 1.

RV. 2. 3. 10. 0. — w. mā RV. 3. 15. 6; 36. 9. 5. 53. 9.

w. mā RV. 10. 106. 2.

w. mā RV. 5. 53. 8. 8. 20. 1. AV. 5. 13. 5.

w. mā RV. 10. 57. 1. AV. 7. 52. 2. 13. 1. 59.

RV. 9. 70. 10. 0.

MIDDLE.

iaq: aṣṭa

ṛ: arta RV. 4. 1. 17. p. 5. 25. 8; 52. 6. a.

ikṛ: kṛta RV. 9. 69. 5.

gam: gánvahi

igṛ: gūrta RV. 1. 173. 2.

ghas: gdha (3 s.) RV. 1. 158. 5. p.

chid: chitthās

VOL. XI.

44

RV. 7. 84. 5. 0.; 85. 5. 0. 8. 59. 5. 8.

RV. 4. 16. 9. 0.

RV. 8. 58. 7. 8.

w. mā AV. 8. 1. 4.

| <i>non-modal.</i> | <i>modal.</i> |
|---------------------------------------------|----------------------------------------------|
| ✓dhr̥: dhr̥thās | w. mā AV. 3. 25. 1. |
| nud: nutthās RV. 6. 17. 5. p. | |
| pad: patthās | w. mā AV. 8. 1. 4. 10. |
| mṛ: mṛthās | w. mā RV. 10. 95. 15. AV. 3. 31. 8. 9. |
| | 5. 30. 17. 19. 27. 8. |
| mṛta | w. mā AV. 8. 2. 5. |
| mṛṣ: mṛṣthās | w. mā RV. 3. 33. 8. |
| yuj: yujata (3 p.) RV. 5. 52. 8. | |
| ric: rikthās RV. 3. 6. 2. p. | |
| van: vanta | RV. 1. 139. 10. 0. |
| vij: vikta | w. mā RV. 1. 162. 15. |
| vr̥: vr̥ta | RV. 9. 101. 13. 0. |
| PASSIVE—3 s. | |
| ghuṣ: ghóṣi | RV. 4. 4. 8. 0. |
| cit: cēti RV. 1. 92. 12. a.; 93. 4; 119. | |
| 4. p. 3. 12. 9. 4. 16. 14. p.; 37. 4; | |
| 43. 6; 55. 4. a. | |
| chid: chedi | w. mā RV. 2. 28. 5. |
| jan: jāni RV. 1. 141. 1. p. | |
| jāni RV. 8. 7. 36. p. | |
| tṛ: tāri RV. 1. 119. 6. p. 10. 144. 5. | |
| p., 6. | RV. 4. 12. 6. 0. 9. 93. 5. 0. 10. 59. 1. 0.; |
| | 126. 8. 0. |
| idā: dāyi RV. 1. 61. 15. 2. 20. 8. p. | |
| 6. 25. 8. a. | |
| 3dā: dāyi | RV. 1. 139. 1. 0. |
| dṛṣ: dārṣi RV. 3. 56. 2. 10. 123. 2. | |
| idhā: dhāyi RV. 1. 141. 1. a.; 145. | |
| 5; 158. 3. p.; 171. 2. a.; 190. 8. a. 4. | |
| 2. 1. a.; 7. 1. p.; 28. 2. p.; 36. 7. a. | |
| 5. 3. 3. a.; 56. 7. a.; 66. 2. p. 6. 20. | |
| 2. p., 5. p.; 29. 5. a. 7. 4. 4. a.; 5. | |
| 2. a. 8. 52. 12. a.; 59. 2. p.; 81. 29. a. | |
| 10. 45. 7. a.; 46. 1; 96. 4. p.; 115. 2. a. | |
| Vāl. 2. 3. a. | RV. 5. 41. 15. 0.; 44. 8. a. 10. 10. 3. |
| | 0. AV. 18. 1. 3. 0.—w. mā AV. 5. |
| 2naṣ: nāṇṣi RV. 6. 51. 12. a. | |
| pad: pādi RV. 6. 20. 5. p. | w. mā RV. 1. 105. 3. AV. 7. 70. 2. 8. |
| | 6. 20. |
| bhr̥: bhāri RV. 9. 97. 23. | |
| muc: moci | w. mā AV. 3. 19. 8. 4. 16. 7. 5. 8. |
| | 4. 8. 8. 19. 11. 9. 20; 10. 19. 16. |
| | 8. 1-27. |
| yuj: yoji RV. 2. 18. 1. | |
| ric: roci RV. 4. 16. 5. p. | |
| ruc: roci RV. 1. 121. 6. | |

| <i>non-modal.</i> | <i>modal.</i> |
|--------------------------------------|------------------------------------------|
| √vac: vāci RV. 7. 58. 6. a. | |
| vand: vandi RV. 10. 61. 16. | |
| 2vid: vėdi RV. 4. 16. 4. p. | |
| vřh: varhi | w. mā RV. 3. 53. 17. |
| çañs: çañsi RV. 2. 4. 8. a. 10. 148. | |
| 4. a. | |
| qiř: çeři | w. mā AV. 11. 9. 13. |
| qr: qāri | w. mā RV. 2. 28. 5. 3. 53. 17. 6. 54. 7. |
| 1qrū: qrāvi RV. 10. 93. 14. p. | |
| sad: sadi RV. 2. 11. 8. p. 18. p. 7. | |
| 73. 2. a. | RV. 10. 93. 5. a. |
| srj: sarji RV. 9. 69. 1; 92. 1. a. | |
| 2hā: hāyi | w. mā AV. 18. 3. 9. |

2. A-AORIST.

ACTIVE.

| | |
|------------------------------------|----------------------------------------------------------------------------|
| 2as: asan RV. 4. 3. 11. p. | |
| āp: āpat | w. mā AV. 1. 30. 1. 11. 1. 22. 14. 2. 69 ⁴ . 17. 29. 19. 20. 4. |
| āpan | w. mā AV. 17. 28. |
| ř: āram RV. 4. 15. 7. a. | w. mā RV. 6. 35. 5. |
| aratam | w. mā RV. 8. 5. 13. |
| aratām | w. mā RV. 3. 33. 13. AV. 14. 2. 16 ⁵ . |
| arāma | w. mā RV. 7. 56. 21. 8. 21. 16. AV. 11. 2. 17. |
| aran | w. mā RV. 1. 125. 7. 5. 31. 13. |
| krand: kradas | RV. 9. 97. 18. 0., 28. 0. |
| krudh: krudhas | w. mā AV. 11. 2. 19. 20. |
| křudh: křudhat | w. mā AV. 2. 29. 4. |
| khyā: khyam | RV. 7. 86. 2. a. |
| khyās | RV. 1. 81. 9. 0. 6. 15. 15. 0.; 48. 19. 0. 8. 54. 9. 0.—w. mā RV. 1. 4. 3. |
| khyāt RV. 8. 68. 2. 10. 53. 2. a. | w. mā RV. 7. 36. 7. |
| khyatam | w. mā RV. 5. 65. 6. 8. 22. 14; 62. 15. |
| khyān RV. 3. 31. 12. p. 10. 10. 2. | |
| AV. 18. 1. 2 ⁶ . | w. mā AV. 1. 162. 1. 7. 93. 8. |
| guh: guhas RV. 8. 6. 17. p. | |
| gřdh: gřdhas | w. mā AV. 11. 2. 21. |
| gřdhat | w. mā AV. 8. 6. 1. |
| tan: tanat | w. mā RV. 1. 91. 23. |
| tam: tamat | RV. 2. 30. 7. a. |
| trp: trpāt | RV. 7. 56. 10. a. |
| trř: trřat | w. mā AV. 2. 29. 4. |
| dan: dānas RV. 1. 174. 2. p. | |
| das: dasat | w. mā RV. 1. 121. 15; 139. 5. AV. 5. 30. 15. |
| dřq: dřen | w. mā RV. 7. 104. 24. 8. 33. 19. AV. 8. 4. 24 ⁷ . |

| <i>non-modal</i> | <i>modal</i> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| √druh: druhas
druhan
inaq: néqat RV. 4. 1. 17. p. | w. mā AV. 9. 5. 4.
w. mā RV. 1. 5. 10.
RV. 10. 128. 6. o. AV. 5. 3. 2 ^o . o.; 13.
2. o.—w. mā RV. 6. 54. 7. |
| bhñ: bhuvam RV. 10. 48. 1; 49. 1.
4. p.; 119. 8.
bhúvas RV. 1. 52. 13. p.; 69. 2. 4.
19. 2. 6. 22. 9. 8. 23. 18 p.; 51. 7;
64. 3. 10. 4. 1; 8. 5 ⁴ . 6; 50. 4 ³ . AV.
6. 106. 3. | RV. 10. 86. 5. s.
RV. 1. 138. 4. o. 4. 2. 6. o.; 16. 18 ² . o.
5. 12. 3. s.; 19. 5. o. 7. 8. 5. o.; 32.
11. s. 8. 1. 28. s.; 55. 6. o. AV. 3.
17. 8. s. 18. 3. 60. o.—w. mā RV.
8. 81. 30. |
| bhúvat RV. 1. 36. 8. p.: 65. 3; 67.
2; 68. 1; 72. 1. 2. 1. 15; 10. 3. p.;
20. 6. p. 4. 1. 16. p.; 7. 2. p.: 16. 8.
p.; 23. 2. 8. 19. 37. a.; 31. 15; 81.
6; 82. 15. p. 9. 97. 23. 24. 10. 21.
5. p.; 23. 2; 86. 6.; 111. 3. p. AV.
7. 1. 2 ⁴ . p. 3. 3. 1. 19. 26. 4 ¹ . | RV. 1. 5. 3. o.; 23. 6. o.; 52. 11. s.; 60.
4. o.; 76. 1. s.; 119. 7. o. 2. 22. 4. o.
3. 62. 9. o. 4. 9. 2. o.; 16. 10. o.; 23.
4. o.; 31. 1. s. 5. 9. 7. o. 6. 16. 18. o.;
48. 2 ² . o. 7. 31. 8. o.; 32. 13. s.; 50.
2. s. 8. 46. 13. o.; 60. 15. o.; 71. 3.
o.; 82. 7. o; 91. 8. s. 9. 34. 4 ¹ . o.;
47. 3. o.; 92. 3. o.; 102. 1. o. 10. 26.
9. o. AV. 1. 22. 2. s. 3. 20. 6. s. 10.
8. 11. s.—w. mā AV. 5. 30. 14.
RV. 1. 186. 2. s. 5. 46. 6. o. 6. 35. 1.
s. 7. 31. 9. o. 8. 27. 4. o. 10. 50.
7. o.; 112. 7. o. |
| bhúvan | w. mā RV. 10. 173. 1. AV. 6. 87. 1 ^o .
AV. 7. 50. 5. s.
w. mā AV. 9. 3. 26.
RV. 8. 24. 27. o. |
| bhraç: bhraçat
math: máthat
muc: mucás RV. 4. 22. 7. p.
mucát
radh: radham
radhāma
riç: riçam
riçat AV. 19. 39. 2-4. | w. mā RV. 1. 50. 13. AV. 17. 6. 24.
w. mā RV. 10. 128. 5. AV. 5. 3. 7.
w. mā RV. 10. 18. 13. AV. 18. 3. 52 ^o .
AV. 19. 49. 10. s.—w. mā RV. 6. 54.
7. 8. 54. 10; 56. 11. 10. 62. 11; 97.
20. AV. 20. 127. 13.
w. mā RV. 1. 94. 1-14. 4. 12. 5. 6.
44. 11. 10. 178. 2. AV. 3. 15. 8. 13.
2. 37. 14. 2. 50. 19. 55. 1. 2.
w. mā RV. 8. 92. 13. AV. 2. 6. 2. 3.
12. 6. 11. 1. 25. 32. 20. 127. 13. |
| riçāma | |
| riçan | |

| <i>non-modal.</i> | <i>modal.</i> |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| √ i rudh : rudhat | RV. 10. 105. 1. s. |
| ruh : ruhám | RV. 8. 1. 31. s. |
| ruhat RV. 9. 40. 2. a. | RV. 1. 34. 5. o. 5. 36. 2. o. |
| vac : vocam RV. 10. 93. 14. a. | RV. 1. 32. 1. s.; 59. 6. s.; 129. 3. s.;
136. 6. s.; 154. 1. s.; 164. 26. s. 2.
15. 1. s.; 21. 3. s. 3. 1. 20. s. 5. 31.
6. s.; 41. 14. s.; 85. 5. s. 6. 8. 1. s.
7. 98. 5. s. 8. 90. 15. s. 10. 69. 5. s.;
112. 8. s. AV. 2. 5. 5 ^s . s. 7. 26. 1 ^s . s.
—w. mā RV. 6. 52. 14. |
| vócas | RV. 1. 27. 4. o. 4. 5. 12. o. 6. 2. 11.
o.; 18. 3. o.; 22. 4. o. 7. 62. 2. o.;
86. 4. o. 8. 64. 2. o. 10. 28. 5. o.
AV. 7. 2. 1. o.—w. mā RV. 7. 1. 22. |
| vocat RV. 1. 117. 22. p. 10. 139.
6. p. | RV. 1. 164. 18. s. 2. 5. 3. s. 3. 54. 5.
s. 4. 5. 3. o. 6. 15. 10. o. 7. 87. 4. o.
10. 10. 6. s.; 12. 8. o.; 88. 17. s.; 114.
7. s.; 129. 6. s. AV. 7. 73. 7. o. 9.
9. 18 ^s . s. 18. 1. 7 ^s . s., 36 ^s . s. |
| vocata RV. Vāl. 4. 9. a. | w. mā AV. 5. 11. 7. 8. |
| vocan RV. 4. 1. 14. 10. 69. 9. p. | w. mā RV. 2. 27. 17. |
| vid : vidam RV. 10. 49. 9. | RV. 1. 42. 7. o.; 173. 13. o. 4. 1. 3. o.
9. 20. 3. o.; 59. 4. o. 10. 113. 10. o. |
| vidás RV. 5. 30. 4. p. 9. 111. 2. p. | |
| vidát RV. 1. 61. 6. p.; 62. 3 ^s . p., 72.
4. p., 8. p.; 84. 14. p.; 96. 4. p.; 100.
8. p. 2. 19. 3. p. 3. 31. 6. p. 5. 7.
6. p.; 32. 5. p.; 44. 8. 45. 8. p. 6.
47. 5. p. 8. 58. 6. p.; 82. 14. p. 10.
21. 5. p.; 43. 4. p.; 68. 11. p.; 86. 18.
a.; 123. 4. p.; 138. 3. p. | RV. 4. 21. 8. o. 8. 68. 6. o. 9. 68. 9.
o.; 96. 10. o. 10. 61. 13. o.; 76. 2.
o.; 99. 8. o.—w. mā RV. 1. 189. 4.
2. 42. 1, 2. 7. 50. 1. AV. 1. 10. 1 ^s .
5. 3. 6 ^s . 8. 1. 16. 20. 130. 14.
w. mā RV. 10. 85. 32. AV. 1. 19. 1 ^s .
12. 1. 32. 14. 2. 11 ^s .
w. mā AV. 8. 6. 3. 11. 4. 26.
RV. 7. 20. 9. o. 8. 69. 3. s.
RV. 1. 10. 6. o. 8. 32. 12. o.; 80. 4. s.
10. 43. 5. s.
w. mā AV. 8. 8. 20. 11. 10. 16.
RV. 4. 2. 7. s.
w. mā RV. 6. 75. 16. AV. 6. 127. 1.
10. 1. 17, 31.
RV. 2. 30. 7. s.
w. mā RV. 1. 162. 11. |
| vidán RV. 8. 28. 1. p. | |
| vṛt : vṛtas | |
| ṛak : ṛákas | |
| ṛákat | |
| ṛakan | |
| ṛās : ṛíṣat | |
| ṛiṣ : ṛiṣas | |
| ṛam : ṛamat | |
| ṛiṣ : ṛiṣat | |

non-modal.

√2 qru: qruvat RV. I. 127. 3.

sad: sadas

sadat RV. 10. 99. 3.

sadāma

sadan RV. 4. 3. 11. p.

san: sanam RV. 8. 57. 17. a.

sānas

sānat RV. I. 100. 18³. p.; 126. 3. p.

sic: sicas

sr: sārāt RV. 4. 30. 10. p. 9. 101. 14.

10. 61. 8.

sāran RV. 4. 17. 3. p.

srp: srpas

srpat

sridh: sridhat

*modal.*RV. 3. 24. 3. o. 8. 17. 1. o.; 64. 1. o.
9. 2. 2. o.; 55. 2. o.; 106. 7. o. 10.
43. 2. o.RV. I. 128. 1. o. 3. 13. 1. o. 8. 13.
24. o. AV. 20. 49. 3. o. (not mss.).w. mā RV. 7. 1. 11; 4. 6. 8. 21. 15.
RV. 8. 52. 2. o.RV. 2. 6. 5³. o.

RV. I. 100. 6. o. 5. 61. 5. o.

w. mā RV. 9. 81. 3.

RV. 10. 61. 23. s.

w. mā AV. 8. 6. 3².

w. mā AV. 6. 134. 2. 12. 1. 46.

w. mā RV. 7. 34. 17.

MIDDLE.

r: arāmahi

arānta RV. 4. 19. 9. p. 5. 31. 8. p.

9. 73. 1. a. 10. 73. 2. p.

rk: krānta RV. I. 141. 3. p.

grabh: grhāmahi

budh: budhānta RV. 7. 9. 4. a.; 78.

5. a. 10. 61. 12. p.

mr̥ṣ: mr̥ṣanta RV. 7. 18. 21.

vac: vōcanta RV. I. 127. 7. 5. 52.
16³.

zvid: vidé

vidata

vidānta RV. 4. 1. 14. p.

vyā(vī): vyāta RV. 2. 17. 2. p. 9.

69. 5. a.; 70. 2; 86. 32.

qās: qīṣāmahi

w. mā AV. 11. 2. 7. 20.

RV. 7. 25. 1. s.

w. mā RV. 8. 21. 16.

w. mā RV. 8. 45. 36.

w. mā AV. 18. 2. 31.

w. mā AV. 6. 32. 3. 8. 8. 21. 11. 2. 2.

RV. 8. 24. 1. o.

3. REDUPLICATED AORIST.

ACTIVE.

am: āmamat

r: arpīpam

krand: cikradas

cikrādat RV. Vāl. 3. 4. p.

krudh: cukrudham

cukrudhāma

kṣip: cikṣipas

cikṣipan

w. mā RV. 9. 114. 4. 10. 59. 8-10.

AV. 6. 57. 3. 10. 5. 23.

w. mā AV. 12. 1. 35.

RV. 9. 90. 4. o.

w. mā RV. 8. 1. 20.

w. mā RV. 2. 33. 4. 10. 142. 3.

w. mā RV. 10. 16. 1. AV. 18. 2. 4².

w. mā AV. 18. 4. 12. 13.

| <i>non-modal.</i> | <i>modal.</i> |
|-------------------------------------------------------|--------------------------------------------------|
| cyu: cucyavat | RV. 2. 41. 10. 0. |
| jan: jījanam RV. 7. 15. 4. a. | |
| jījanat RV. 1. 129. 11 ² . p. 4. 16. 3. p. | |
| 8. 12. 14. p. 10. 115. 1. a. | |
| jījanan RV. 1. 151. 1. p. 4. 6. 8. a. | |
| 10. 11. 3. p. AV. 18. 1. 20 ² . p. | |
| jā: jūjuvat | RV. 2. 31. 4. 0. |
| tu: tūtos RV. 6. 26. 4. p. | |
| tūtōt RV. 2. 20. 5. p; 7. p. | |
| dāq: dādāças | RV. 1. 94. 15. 8. |
| dādāçat | RV. 1. 91. 20. 8. 5. 37. 5. 8. 6. 5. 5. 8. |
| | 7. 20. 8. 8. 10. 77. 7. 8. |
| dīp: didīpas | RV. 8. 48. 6. 0. |
| duṣ: dūduṣat RV. 3. 3. 1. | |
| dyut: didyutas RV. 5. 30. 4. p. | RV. 2. 2. 7. 0. |
| dhū: dūdhōt RV. 7. 21. 4. p. 10. | |
| 26. 7. | |
| dhṛ: dīdharam RV. 9. 105. 4. a. | |
| dīdhar (2 s.) RV. 6. 17. 6. p; 67. | |
| 4. p. | |
| dīdharas | RV. 8. 89. 1. 8. |
| dīdharat RV. 3. 2. 10. | RV. 8. 57. 19. 8. |
| dhṛṣ: dadhārṣat | RV. 2. 41. 8. 8. |
| nam: nīnamas | RV. 8. 24. 27. 0. |
| inaq: nīnaças | RV. 6. 48. 17. 0. |
| inu: nūnot RV. 6. 3. 7. | |
| pat: paptam | w. mā AV. 12. 1. 31. |
| paptas | w. mā RV. 10. 95. 15. |
| paptat | w. mā AV. 7. 52. 2. |
| pāptan RV. 2. 31. 1. 6. 63. 6. p. | |
| ipṛ: piparat | RV. 2. 20. 4. 0. |
| 2pṛ: piparas | RV. 1. 138. 2. 8. 4. 2. 8. 0. |
| pīparat | RV. 1. 46. 6. 8. 3. 32. 14. 8. 5. 77. 4. |
| | 0. AV. 19. 40. 4. 0. |
| bhī: bībhayat RV. 1. 80. 12. p. | |
| 2mā: mīmāyat RV. 10. 27. 22. | |
| mṛṣ: mīmṛṣas | RV. 1. 31. 16. 0. AV. 3. 15. 4 ² . 0. |
| zyu: yūyot | RV. 10. 95. 12. 8. |
| radh: rīradhas | w. mā RV. 1. 25. 2. 2. 32. 2. 3. 16. |
| | 5. 8. 49. 8. |
| rīradhat | w. mā RV. 2. 33. 5. |
| rīradhatam | w. mā RV. 7. 94. 3. 8. 8. 13. |
| rīradhata | w. mā RV. 6. 51. 6. |
| ram: rīramat RV. 4. 17. 14. 10. | |
| 92. 8. | RV. 7. 32. 10. 8.—w. mā RV. 5. 53. 9. |
| rīraman | w. mā RV. 2. 18. 3. 3. 35. 5. 7. 32. 1. |
| | 10. 160. 1. |
| riṣ: rīriṣas | w. mā RV. 1. 104. 6; 114. 7. 8. 7. 46 |

non-modal.

4/riṣ: ririṣat
 ririṣata
 rup: rūrupas AV. 4. 7. 3. 5. 6.
 vij: vivijas
 quo: qūqucas
 qnath: qīqnatham RV. 10. 49. 3. p.
 qīqnathas RV. 8. 6. 16. p.; 24. 25. p.
 10. 22. 14.
 qīqnáthat RV. 2. 20. 5. p. 4. 30. 10.
 p. 6. 4. 3. a.
 qrath: qīqráthas
 qīqrathat RV. 1. 128. 6.²
 sā(sī): siṣet
 sādḥ: siṣadhas
 sūd: súṣūdas
 suṣūdat
 stu: tuṣṭávat RV. 8. 8. 16. a.
 sthā: tiṣṭhipat
 spr̥q: piṣpr̥ças
 sru: susros
 susrot
 svad: siṣvadat
 svap: siṣvap (2 s.) RV. 6. 20. 13. p.;
 26. 6. p.
 siṣvapas RV. 1. 121. 11. p.
 zhā: jhiṣas
 hv̥r̥: jhvaras

modal.

3; 89. 5. 10. 18. 1; 128. 8. AV. 5.
 3. 8°. 6. 51. 3°. 11. 2. 29°.

w. mā RV. 3. 53. 20.
 w. mā RV. 1. 89. 9.
 w. mā RV. 8. 68. 8.
 w. mā AV. 18. 2. 4.
 RV. 8. 59. 10. 0.
 RV. 1. 24. 14. 0. 2. 28. 7. 0. 4. 12. 4.
 0. 5. 85. 7. 0.—w. mā RV. 4. 32. 22.
 w. mā RV. 8. 56. 8.
 RV. 2. 24. 1. 8. 6. 56. 5. 0.
 RV. 1. 73. 8. 8. 7. 1. 20. 0.
 RV. 10. 70. 2. 0.
 w. mā RV. 1. 162. 20.
 RV. 6. 15. 18. 0.
 w. mā AV. 12. 3. 22.
 w. mā RV. 10. 101. 8. AV. 2. 29. 7.
 19. 58. 4°.

RV. 1. 188. 10. 0.
 RV. 3. 53. 19. 0.
 w. mā RV. 10. 16. 8. AV. 18. 3. 53°.

MIDDLE.

jan: jījananta RV. 1. 60. 3. a.
 sap: siṣapanta

RV. 7. 43. 4. 0.

4. S-AORIST.

ACTIVE.

ji: jes
 jēṣma
 jāiṣus
 dah: dhāk (3 s.)
 dyut: dyāut RV. 4. 6. 6.
 dhā: dhāsus RV. 7. 97. 5. p.
 nī: nāiṣṭa
 bhaj: bhāk (2 s.)
 bhāk (3 s.)

RV. 6. 4. 4. 0.
 RV. 6. 45. 12. 0. 7. 18. 13. 0. 10. 156.
 1. 0.
 w. mā AV. 4. 38. 3.
 w. mā RV. 1. 158. 4. AV. 8. 1. 11.
 w. mā RV. 8. 30. 3.
 w. mā RV. 8. 69. 8; 70. 6. 9. 72. 8.
 RV. 7. 18. 13. 0.

| <i>non-modal.</i> | <i>modal.</i> |
|------------------------------------|----------------------------------------------------|
| √bhī: bhāṣis | w. mā AV. 10. 9. 7. |
| bhṛ: bhār (3 s.) RV. 1. 128. 2. p. | |
| 2yu: yūṣam | w. mā AV. 6. 123. 4. |
| yāus | w. mā RV. 2. 32. 2. |
| yāuṣtam | w. mā RV. 8. 75. 1. 10. 85. 42. AV.
14. 1. 22°. |
| yāuṣta | w. mā AV. 3. 30. 5. |
| yāuṣus | w. mā RV. 10. 23. 7. |
| vah: vākṣit | w. mā AV. 5. 8. 3. |
| qṛ: qarāis | w. mā AV. 12. 3. 18. |
| srj: srās (2 s.) | w. mā AV. 11. 2. 19. 26. |
| srāṣtam | w. mā AV. 11. 2. 1. |
| stu: stoṣam | RV. 1. 187. 1. 8. |
| zhā: hās | w. mā RV. 3. 53. 20. |
| hāsus | w. mā RV. 8. 64. 8. |

MIDDLE.

| | |
|-----------------------------------|-------------------------------------------|
| ikṣi: kṣeṣta | w. mā AV. 4. 34. 8. |
| 2gā: gāsi | RV. 5. 25. 1. 8. 8. 27. 2. 8. |
| cyu: cyoṣthās | w. mā RV. 10. 173. 2. AV. 6. 87. 2°. |
| nij: nikṣi | w. mā AV. 10. 5. 15-21. 16. 1. 4. |
| inu: nūṣata (3 p.) RV. 9. 103. 3. | |
| pad: patai | w. mā AV. 6. 120. 2. |
| 2pā: pāsta | w. mā AV. 12. 3. 43. |
| bhāj: bhakṣi | RV. 7. 41. 2. 0. AV. 3. 16. 2° 0. |
| mad: matsata (3 p.) | w. mā RV. 9. 85. 1. |
| man: maṁsi | RV. 7. 88. 2. 8. |
| maṁsthās | w. mā AV. 9. 5. 4. |
| maṁsta | w. mā AV. 8. 1. 12. |
| māṁsta | w. mā AV. 11. 2. 8. |
| mi: meṣi | w. mā AV. 16. 4. 5. |
| meṣthās | w. mā AV. 8. 1. 5; 2. 1. |
| meṣta | w. mā AV. 12. 1. 33. |
| muc: mukṣata (3 p.) | w. mā RV. 10. 87. 19. AV. 5. 29. 11°. |
| yaj: yakṣi | RV. 6. 16. 8. 8. 10. 4. 1. 8; 52. 5. 8. 1 |
| yam: yaṁsi RV. 1. 61. 2. | |
| yudh: yutsmahi | w. mā AV. 7. 52. 2. |
| ram: raṁsthās | w. mā AV. 14. 2. 19. |
| rā: rāsthām | RV. 1. 46. 6. 0. |
| van: vāṁsi | RV. 5. 70. 1. 0. |
| vrj: vrkṣi | w. mā RV. 1. 27. 13. |
| sac: sakṣata RV. 8. 13. 28. | |
| sah: sākṣi RV. 10. 49. 1. | |
| ihā: hāsmahi | w. mā RV. 10. 128. 5. AV. 5. 3. 7°. |
| zhā: hāsthās | w. mā AV. 18. 3. 73. |
| hāsta | w. mā AV. 18. 2. 24. |

5. Iṣ-AORIST.

| <i>non-modal.</i> | ACTIVE. | <i>modal.</i> |
|-----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|---------------|
| √av: ávis RV. 6. 10. 6. a. | RV. 6. 25. 1. o. | |
| ávit | RV. 7. 34. 14. o. | |
| áviṣṭam (yáviṣṭam?) | RV. 8. 5. 13. 8. | |
| 2aṣ: aṣit | w. mā RV. 10. 87. 17. AV. 8. 3. 17 ^o . | |
| kram: kramis RV. 1. 51. 6. p. | w. mā AV. 12. 2. 18. | |
| 2gr: garit | w. mā RV. 5. 40. 7. | |
| grabh: grabhiṣṭa | w. mā RV. 2. 29. 5. | |
| car: carit | w. mā RV. 7. 25. 1. | |
| oud: codis RV. 1. 63. 4. p. | | |
| jan: jániṣṭām RV. 10. 46. 9. p. | | |
| jiv: jivis | w. mā AV. 5. 13. 4. | |
| jivit | w. mā AV. 10. 5. 25-35. 16. 7. 13. | |
| jiviṣus | w. mā AV. 9. 2. 10. | |
| jīrv: jīrvit RV. 2. 11. 10. p. | | |
| 3jṛ: jāriṣus | w. mā RV. 1. 125. 7; 139. 8 ^o . | |
| tṛ: tāris | RV. 6. 8. 7. o.; 25. 2. o. 8. 48. 4. o., 7. o.—w. mā RV. 10. 54. 5. | |
| tārit RV. 1. 69. 5. p.; 152. 3. 2. 20. 8. p. | RV. 1. 73. 1. o. 8. 68. 6. o.—w. mā RV. 6. 47. 9. 9. 114. 4. | |
| tāriṣus | w. mā AV. 2. 7. 4. | |
| 1dā: dāsit | w. mā RV. 7. 1. 21. | |
| bṛh: barhis RV. 4. 16. 12. p. | | |
| barhit RV. 1. 100. 18. p. 4. 28. 3. p. | | |
| math: mātḥis | RV. 1. 127. 11. o. | |
| māthit RV. 1. 71. 4. p.; 148. 1. p. | | |
| mathiṣṭana | w. mā AV. 19. 40. 2. | |
| muṣ: moṣis | w. mā RV. 1. 24. 11; 104. 8. AV. 7. 99. 1. 8. 2. 17. | |
| mṛdh: mardhis RV. 7. 25. 4. | w. mā RV. 4. 20. 10. | |
| mardhiṣṭam | w. mā RV. 7. 73. 4; 74. 3. | |
| 2yu: yāvis | RV. 1. 129. 3. o. 8. 68. 4. o. | |
| yudh: yodhis | RV. 10. 120. 3. o. AV. 5. 2. 3 ^o . o. | |
| rakṣ: rakṣis | w. mā AV. 5. 7. 1. | |
| radh: randhis RV. 1. 174. 2. p. 4. 16. 13. p. | w. mā RV. 7. 31. 5. | |
| ran: rāpiṣṭana | RV. 2. 36. 3. o. | |
| 2ru: rāviṣam | RV. 10. 86. 5. 8. | |
| vad: vādiṣus | w. mā AV. 6. 118. 3. | |
| vadh: vādhiṣ RV. 1. 165. 8. p. 10. 28. 7. p. | | |
| vādhis RV. 1. 33. 4. p.; 53. 8. p. 4. 30. 8. p. 6. 33. 3. | w. mā RV. 1. 104. 8; 114. 7. 8; 170. 2. 7. 46. 4. 8. 45. 34; 68. 8. AV. 7. 11. 1 ^o . 8 ^o . 2. 5. 10. 1. 29. | |

non-modal.

√vadh: vādhit RV. 4. 17. 3. p. 5.
44. 12. 6. 27. 5. p. 8. 32. 2. p.

vadhiṣṭa
vadhiṣṭana
vadhiṣus

viq: veqit
qaṁs: qāṁsiṣam

qnath: qnathiṣṭam RV. 7. 99. 5. p.
qram: qramiṣma
sidh: sedhis
isū: sāvis AV. 7. 14. 3. p.
stabh: stāmbhit RV. 1. 121. 2. p.
sphur: spharis
svan: svānit RV. 2. 4. 6.
hiṁs: hiṁsis

hiṁsit

hiṁsiṣṭam

hiṁsiṣṭa

hiṁsiṣus

modal.

w. mā RV. 1. 38. 6. 2. 42. 2. 8. 56.
20; 64. 9. AV. 6. 56. 1; 110. 3; 112.
1; 142. 1.
w. mā RV. 8. 90. 15.
w. mā RV. 5. 55. 9.
w. mā AV. 2. 28. 3.
w. mā RV. 8. 49. 20.
RV. 6. 48. 1. 8., 16. 8. 8. 45. 28. 8. 10.
44. 5. 8.; 96. 1. 8.

w. mā RV. 2. 29. 4. 8. 4. 7.
w. mā RV. 10. 27. 20.
RV. 2. 28. 9. 0. 5. 82. 4. 0. 6. 71. 6. 0.
w. mā RV. 6. 61. 14.
w. mā AV. 9. 3. 16. 10. 9. 11. 11. 2.
20. 29. 12. 1. 34. 18. 4. 30.
w. mā RV. 10. 121. 9; 165. 3. AV.
3. 28. 5. 6. 6. 27. 3°. 7. 54. 2.
w. mā AV. 5. 9. 8. 6. 140. 2. 3. 11.
2. 1. 14. 1. 63.
w. mā RV. 10. 15. 6. AV. 18. 1. 52°. 19. 40. 3.
w. mā AV. 2. 28. 1. 7. 102. 1. 14. 2. 9.

MIDDLE.

av: āviṣṭa
kram: krāmiṣṭa RV. 1. 155. 4. p. 8.
52. 9. p.
kṣan: kṣapiṣṭhās
jan: jāniṣṭhās RV. 1. 68. 4. p. 5. 30.
5. p. 7. 28. 2. 10. 73. 1. a.
jāniṣṭa RV. 5. 1. 5. p.; 9. 3. a. 7. 3.
9. a. 9. 98. 9. a. 10. 31. 10. p.; 40.
9. p.; 95. 10. p. Vāl. 3. 4. p., 8. p.
AV. 4. 1. 5. p.

nud: nudīṣṭhās
pan: paṇiṣṭa
pā: paṇiṣṭa RV. 9. 64. 10. a.; 109.
13. a.

prath: prāthiṣṭa RV. 5. 58. 7.
bādh: bādhiṣṭa RV. 7. 23. 3. p.
mand: māndiṣṭa RV. 1. 51. 11. a.
mṛṣ: mṛṣiṣṭhās
yam: yāmiṣṭa RV. 5. 32. 7. p.
rādh: rādhiṣṭa

RV. 7. 34. 12. 0.
w. mā AV. 10. 1. 16.
w. mā AV. 12. 1. 32.
RV. 7. 45. 2. 0.
w. mā AV. 18. 2. 25.
w. mā RV. 1. 71. 10.
w. mā AV. 1. 1. 4. 3. 29. 8.

*non-modal.**modal.*

√2vas: vasiṣṭa RV. 2. 36. 1. a. 9. 2.

3. a.

vyath: vyathiṣṭhās

w. mā AV. 12. 3. 23. 14. 1. 48. 19.

33. 5.

vyathiṣmahī

w. mā RV. 12. 1. 28.

6. SIṢ-AORIST.

2hā: hāsīt

w. mā AV. 2. 28. 3. 7. 53. 4. 8. 1. 15.

13. 1. 12. 16. 4. 3.

hāsīṣṭam

w. mā AV. 16. 4. 5.

hāsīṣṭām

w. mā AV. 16. 2. 5; 3. 2-4?

hāsīṣṭa

w. mā AV. 9. 4. 24.

hāsīṣus

w. mā AV. 6. 41. 3. 8. 2. 26.

7. SA-AORIST.

ACTIVE.

duh: dukṣās

w. mā RV. 7. 4. 7.

dukṣān

RV. 1. 121. 8. 8.

dhukṣan

RV. 8. 1. 17. 0.

dviṣ: dvikṣat

w. mā AV. 3. 30. 3.

mṛṣ: mṛkṣas RV. 4. 30. 13. p.

mṛkṣata

RV. 8. 56. 9. 0.

ruh: rukṣas

AV. 17. 8. 0.

MIDDLE.

duh: dukṣata RV. 1. 160. 3. p.

dhúkṣata RV. 6. 48. 12. a, 13. a.

dhukṣánta RV. 8. 7. 3. p.

dviṣ: dvikṣata

w. mā AV. 12. 1. 18, 23-5; 2. 33.

DERIVATIVE CONJUGATIONS.

I. PASSIVE: PRES. SYSTEM.

ac: acyanta RV. 5. 54. 12.

asū: sūyata RV. 10. 132. 4. p.

II. INTENSIVE: PRES. SYSTEM.

ACTIVE.

diṣ: dédiṣam

RV. 8. 63. 15. 8.

dṛ: dárdar (2 s.) RV. 1. 63. 7. p. 4.

16. 8. p., 13. p. 6. 20. 7. p.

dardar (3 s.) RV. 7. 18. 13. p.

dyut: dávidyot RV. 6. 3. 8. 10. 95.

10. p.

inu: návīnot RV. 6. 3. 7. 7. 87. 2.

mṛj: marmjámá RV. 3. 18. 4. a.

skand: kánīṣkan

RV. 7. 103. 4. a.

| <i>non-modal.</i> | MIDDLE. | <i>modal.</i> |
|------------------------------------------------|---------|---------------|
| ✓ mṛj: marmjāta RV. 4. 1. 14. p. | | |
| vāq: vāvaqānta RV. 1. 62. 3. p. 7. | | |
| 75. 7. | | |
| san: sanīṣpata RV. 1. 131. 5 ² . p. | | |

III. DESIDERATIVE.

PRES. SYSTEM: ACTIVE.

| | |
|----------------------------------|---------------------|
| ghas: gighatsas | w. mñ AV. 5. 18. 1. |
| oit: cikitsat | RV. 4. 16. 10. 0. |
| duh: dúduṣṣan RV. 10. 61. 10. p. | RV. 10. 74. 4. 8. |
| bhid: bibhītsan RV. 10. 61. 13. | |

MIDDLE.

| |
|--------------------------------|
| āp: apsanta RV. 1. 100. 8. |
| dhā: didhīṣanta RV. 1. 132. 5. |
| sah: stikṣanta RV. 7. 60. 11. |

Iṣ-AORIST: ACTIVE.

| | |
|-------------|--------------------|
| ṛdh: irtals | w. mñ AV. 5. 7. 6. |
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IV. CAUSATIVE.

PRES. SYSTEM: ACTIVE.

| | |
|-------------------------------------|-------------------------------------|
| ikṣ: ikṣáyat | RV. 1. 132. 5. 8. |
| ir: irayam | RV. 10. 89. 4. 8.; 116. 9. 8. |
| irayat | RV. 8. 68. 6. 0. |
| ṛc: arcayas RV. 3. 44. 2. p. | |
| ṛd: ardáyas RV. 10. 147. 2. p. Val. | |
| 5. 2. p. | |
| ardáyat RV. 1. 187. 1. p. | |
| kup: kopayas RV. 1. 54. 4. p. | |
| kopayat RV. 10. 44. 8. p. | |
| ikṣi: kṣepayat | RV. 5. 9. 7. 0. |
| ghuṣ: ghoṣáyas RV. 9. 108. 3. p. | |
| Val. 2. 8. | |
| oit: oitayat RV. 1. 180. 8. a. | RV. 2. 2. 5. 0. |
| cetayat RV. 4. 1. 9. | |
| oud: oodáyas RV. 1. 175. 3. 6. 26. | |
| 3. p. 8. 12. 3. | RV. 9. 17. 5. 0. 10. 22. 10. 0. |
| codayat RV. 10. 80. 2; 123. 1. | |
| chand: chadayat RV. 6. 49. 5. | RV. 10. 31. 4. 0. |
| jan: janáyas RV. 10. 55. 2. p. | |
| janáyat RV. 1. 71. 8. a. 10. 45. 8. | |
| p.; 67. 1. a. | RV. 6. 52. 16. 0. AV. 14. 2. 14. 0. |
| janayan RV. 10. 66. 9. p. | |
| daṁs: daṁsáyas RV. 10. 138. 1. p. | |
| dabh: dambháyas RV. 1. 54. 6. p. | |
| 10. 22. 11. p. | |

| <i>non-modal.</i> | <i>modal.</i> |
|---------------------------------------------------------------------------------|--------------------|
| √dabh: dambhāyat RV. 6. 18. 10. p. | |
| dīp: dīpayas | RV. 6. 22. 8. o. |
| dṛ: darayas RV. 1. 62. 4. p. | |
| darayat RV. 10. 99. 11. p. | |
| dyut: dyotayat RV. 6. 39. 3. p. | |
| dhan: dhanāyan RV. 1. 71. 3. p. | |
| dhṛ: dhārāyam RV. 4. 42. 3. p., 4. p. 10. 48. 8. p.; 49. 9. p., 10. p. | |
| dhārayas RV. 9. 22. 7. p.; 107. 23. p. 10. 73. 4. | |
| dhārāyat RV. 1. 103. 2. p. 2. 15. 2. p. 8. 32. 25. p.; 66. 6. p. 10. 92. 10. p. | RV. 7. 64. 4. a. |
| dhārayan RV. 1. 96. 1-7. p. 2. 27. 8. | |
| dhvas: dhvasayas RV. 10. 73. 6. p. | |
| pat: patāyat RV. 1. 152. 5. 10. 40. 9. p.; 43. 8. p. | RV. 5. 45. 9. o. |
| pan: panayat RV. 4. 33. 5. p. | |
| puṣ: poṣayat | RV. 5. 9. 7. o. |
| prath: prathayat RV. 4. 42. 4. p. | |
| bṛh: barhāyas RV. 1. 53. 6. p., 7. p. | |
| mañh: mañhāyam RV. 10. 48. 9. p. | |
| mah: mahayam | RV. 7. 61. 6. a. |
| mahayan RV. 7. 42. 3. | |
| mṛj: marjayan RV. 10. 122. 5. p. | |
| 2yu: yāvayat | AV. 6. 4. 2. o. |
| radh: randhayam RV. 10. 49. 4. p., 5. p. | |
| randhāyas RV. 6. 43. 1. p. | |
| randhayat RV. 2. 19. 6. p. | |
| ran: ranayan | RV. 1. 100. 7. o. |
| ram: rāmayas RV. 1. 121. 13. p. | |
| rāmāyat RV. 1. 56. 3. p. | |
| ruc: rocayat RV. 3. 2. 2. p. 6. 39. 4. p. 9. 86. 21. p. | |
| ruh: rohayas RV. 8. 78. 7. p. 9. 107. 7. p. 10. 156. 4. p. | |
| rohayat RV. 1. 7. 3. p. | |
| rej: rejayat RV. 4. 22. 3. p. 5. 87. 5. 10. 61. 16. p. | |
| vakṣ: vakṣayam RV. 10. 49. 8. p. | |
| ivas: vāsayat RV. 6. 39. 4. p. | |
| 2vas: vāsayas | RV. 6. 35. 1. a. |
| vṛt: vartayas RV. 1. 121. 9. p. | |
| vartayat | RV. 10. 95. 12. a. |
| vartayan RV. 5. 48. 3. | |
| vṛdh: vardhayat RV. 10. 25. 10. p. | |
| vṛṣ: varṣayatam RV. 5. 63. 6. | |
| qam: qamayat | AV. 6. 52. 3. o. |

| <i>non-modal.</i> | <i>modal.</i> |
|------------------------------------------|--------------------------------------------|
| ✓qardh: qardháyat | RV. 8. 13. 6. s. |
| qnath: qnathayas RV. 10. 95. 5. | |
| qvañc: qvañcáyas RV. 10. 138. 2. p. | |
| sñd: sñdáyat RV. 1. 71. 8. a. | |
| sñh: sñháyat RV. 9. 97. 54. p. | |
| svan: svanayan RV. 10. 3. 6. | |
| hṛṣ: harṣayan RV. 9. 111. 3. | |
| MIDDLE. | |
| iṣ: iṣáyanta RV. 2. 2. 11. 7. 87. 3. | RV. 1. 77. 4. s. |
| Ir: Iráyanta RV. 8. 7. 3. p. | |
| 2ukṣ: ukṣáyanta | RV. 6. 17. 4. o. |
| cit: citáyanta RV. 2. 34. 2. 10. 95. 3 | RV. 4. 51. 3. o. |
| jan: janáyanta RV. 1. 95. 4. p. | RV. 9. 95. 1. o. |
| janáyanta RV. 1. 95. 2. p.; 141. 2. | |
| a. 3. 2. 3. p.; 31. 2; 49. 1. p. 6. 7. | |
| 1. p., 2. p. 7. 1. 1. p.; 22. 9. a.; 31. | |
| 11. 10. 91. 6. p. | RV. 5. 49. 3. o. 10. 66. 2. o.; 87. 13. s. |
| | AV. 8. 3. 12*. s. |
| tṛp: tarpáyanta | RV. 1. 85. 11. o. |
| das: dasáyanta RV. 5. 45. 3. p. | |
| dyut: dyutáyanta RV. 2. 34. 2. | |
| dru: draváyanta | RV. 10. 148. 5. o. |
| dhan: dhanáyanta | RV. 1. 167. 2. s. |
| dhṛ: dhāráyanta RV. 2. 27. 9. 4. | |
| 1. 18. p.; 42. 2. 5. 15. 2; 29. 1. p. 7. | |
| 66. 2. | |
| nad: nadáyanta RV. 1. 166. 5. | |
| pat: patáyanta RV. 1. 169. 7. | |
| pan: panáyanta RV. 1. 87. 3. 7. 1. 10. | RV. 3. 6. 7. s. |
| mah: maháyanta | RV. 3. 3. 3. o. |
| mṛj: mṛjayanta RV. 5. 3. 3. 7. 39. | |
| 3. p.; 3. 5. 9. 68. 6. p. | RV. 1. 61. 2. o. 8. 73. 8. o. 9. 93. 1. o. |
| ran: rapáyanta RV. 3. 57. 2. p. 6. | |
| 1. 4. p. 10. 148. 3. | RV. 1. 147. 1. s. 4. 7. 7. s. |
| qubh: qubháyanta RV. 7. 56. 16. | |
| qnath: qnatháyanta (qrath-?) RV. | |
| 8. 88. 6. | |
| qrath: qratháyanta RV. 5. 54. 10; | |
| 85. 4. | |
| svad: svadayanta | RV. 9. 105. 1. o. |
| ihṛ: haráyanta | RV. 4. 37. 2. o. |
| hṛṣ: harṣáyanta | RV. 4. 37. 2. o. |

REDUP. AORIST.

bhī: bībhīṣathās w. mā RV. 8. 68. 8.

Iṣ-AORIST.

dhvan: dhvanayit w. mā RV. 1. 162. 15.
vyath: vyathayis w. mā AV. 5. 7. 2.

V. DENOMINATIVE.

PRES. SYSTEM: ACTIVE.

*non-modal.**modal.*

/açāy: açāyas RV. 6. 33. 2.

irasy: irasyas

w. mā RV. 7. 40. 6.

iṣaṇ: iṣaṇas

RV. 4. 16. 9. 0.: 22. 10. 0.

iṣaṇat RV. 4. 17. 14.

uruṣy: uruṣyāt RV. 3. 5. 8. 10. 80.

3. p.

turaṇy: turāṇyan RV. 10. 61. 11. p.

damany: damanyat RV. 10. 99.

6. p.

daçasy: daçasyān RV. 10. 138. 1. p.

duvasy: duvasyan RV. 3. 1. 13. p. RV. 3. 1. 2. 0.

namasy: namasyan RV. 1. 72. 5. p.

pruṣāy: pruṣāyat RV. 1. 121. 2. p.

pruṣāyan RV. 1. 180. 1. 4. 43. 5.

mathāy: mathāyāt RV. 9. 77. 2. p.

muṣāy: muṣāyās RV. 4. 30. 4. p. 6.

31. 3. p.

muṣāyāt RV. 1. 61. 7. p. 7. 18. 19. p.

riṣaṇy: riṣaṇyas

w. mā RV. 2. 11. 1. 7. 9. 5. 10. 22. 15.

riṣaṇyata

w. mā RV. 8. 1. 1; 20. 1.

ruvaṇy: ruvaṇyas

w. mā RV. 8. 85. 12.

vapuṣy: vapuṣyan RV. 3. 1. 4. p.

sapary: saparyan RV. 1. 70. 10. RV. 10. 7. 3. 0.

akabhāy: akabhāyat RV. 5. 29. 4.

p. 6. 44. 24. p.

stabhāy: stabhāyas RV. 6. 17. 7. p.

stabhāyat RV. 4. 5. 1; 6. 2.

MIDDLE.

açāy: açāyata RV. 10. 92. 1.

irajy: irajyānta RV. 7. 23. 2. p.

iṣaṇ: iṣaṇanta RV. 4. 23. 9.

RV. 1. 134. 5. 0.

iṣaṇay: iṣaṇayanta RV. 10. 67. 8.

ṛghāy: ṛghāyānta RV. 4. 17. 2. p.

ṛtay: ṛtayanta

RV. 8. 3. 14. 8.

kṛpaṇ: kṛpāṇanta RV. 10. 74. 3.

taruṣ: taruṣanta RV. 1. 132. 5.

dhunay: dhunayanta RV. 2. 25. 5.

panāy: panāyata RV. 6. 75. 6.

pruṣāy: pruṣāyānta

RV. 1. 186. 9. 8.

bhuraj: bhurajānta RV. 4. 43. 5.

rucay: rucayanta RV. 3. 6. 7.

suṣvay: suṣvāyanta RV. 7. 36. 6.

AORIST PASSIVE.

jāray: jārayāyi

RV. 6. 12. 4. 0.

Iṣ-AORIST.

ūnay: ūnayis

w. mā RV. 1. 53. 3.

SUMMARY OF OCCURRENCES.

| | | non-modal. | | | | | | modal. | | | | | | Totals. |
|------------------------|------------|------------|-------|------|------------|-------|------|-----------|------|--------|------------|------|--------|---------|
| | | Rig-Veda. | | | Ath.-Veda. | | | Rig-Veda. | | | Ath.-Veda. | | | |
| | | pres. | pret. | aor. | pres. | pret. | aor. | sub. | opt. | w. mā. | sub. | opt. | w. mā. | |
| Present System : | act. | 53 | 181 | 6 | 5 | 5 | -- | 71 | 80 | 36 | 6 | 20 | 40 | 715 |
| | mid. | 75 | 51 | 2 | 2 | 1 | -- | 11 | 54 | 8 | -- | 2 | 6 | |
| Perfect System : | act. | 4 | 7 | -- | -- | -- | -- | 1 | 2 | 3 | -- | -- | 1 | 29 |
| | mid. | 2 | 3 | 1 | -- | -- | -- | 2 | -- | 3 | -- | -- | -- | |
| Aorist System : | | | | | | | | | | | | | | |
| root-aor. { | act. | 81 | 63 | 21 | 8 | 3 | 2 | 16 | 120 | 89 | 2 | 32 | 40 | 620 |
| | mid. | 4 | 4 | 1 | -- | -- | -- | 2 | 5 | 3 | -- | -- | 9 | |
| | pass. | 15 | 21 | 24 | -- | -- | -- | 2 | 8 | 6 | -- | 1 | 38 | |
| a-aor. { | act. | 38 | 52 | 8 | 8 | 2 | -- | 47 | 93 | 62 | 10 | 6 | 63 | 417 |
| | mid. | 7 | 7 | 4 | -- | -- | -- | 1 | 1 | 2 | -- | -- | 6 | |
| redup. aor. { | act. | 11 | 24 | 6 | 3 | 1 | -- | 16 | 22 | 37 | -- | 2 | 16 | 140 |
| | mid. | -- | -- | 1 | -- | -- | -- | -- | 1 | -- | -- | -- | -- | |
| s-aor. { | act. | 1 | 2 | -- | -- | -- | -- | 1 | 5 | 11 | -- | -- | 11 | 75 |
| | mid. | 4 | -- | -- | -- | -- | -- | 6 | 3 | 5 | -- | 1 | 25 | |
| is-aor. { | act. | 5 | 23 | 1 | -- | 1 | -- | 7 | 61 | 39 | -- | 1 | 54 | 228 |
| | mid. | 2 | 12 | 9 | -- | 1 | -- | -- | 2 | 1 | -- | -- | 9 | |
| sis-aor., act. | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 14 | 14 |
| sa-aor. { | act. | -- | 1 | -- | -- | -- | -- | 1 | 2 | 1 | -- | 1 | 1 | 16 |
| | mid. | -- | 2 | 2 | -- | -- | -- | -- | -- | -- | -- | -- | 5 | |
| Deriv. Conjugations : | | | | | | | | | | | | | | |
| Passive | | 1 | 1 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2 |
| Intensive : | | | | | | | | | | | | | | |
| pres. { | act. | 3 | 6 | 1 | -- | -- | -- | 1 | -- | -- | -- | -- | -- | 16 |
| | mid. | 1 | 4 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| Desiderative : | | | | | | | | | | | | | | |
| pres. { | act. | 1 | 1 | -- | -- | -- | -- | 1 | 1 | -- | -- | -- | 1 | 8 |
| | mid. | 3 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| is-aor., act. | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1 | 1 |
| Causative : | | | | | | | | | | | | | | |
| pres. { | act. | 17 | 68 | 3 | -- | -- | -- | 8 | 11 | -- | -- | 3 | -- | 171 |
| | mid. | 22 | 16 | 2 | -- | -- | -- | 6 | 14 | -- | 1 | -- | -- | |
| redup. aor., act. | | -- | -- | -- | -- | -- | -- | -- | -- | 1 | -- | -- | -- | 1 |
| is-aor., act. | | -- | -- | -- | -- | -- | -- | -- | -- | 1 | -- | -- | 1 | 2 |
| Denominative : | | | | | | | | | | | | | | |
| pres. { | act. | 8 | 16 | -- | -- | -- | -- | -- | 4 | 7 | -- | -- | -- | 50 |
| | mid. | 10 | 2 | -- | -- | -- | -- | 2 | 1 | -- | -- | -- | -- | |
| root-aor. | | -- | -- | -- | -- | -- | -- | -- | 1 | -- | -- | -- | -- | 1 |
| is-aor., act. | | -- | -- | -- | -- | -- | -- | -- | -- | 1 | -- | -- | -- | 1 |
| Totals | | 368 | 567 | 92 | 26 | 14 | 2 | 202 | 491 | 316 | 19 | 69 | 341 | 2507 |

ARTICLE XI.

THE NORTHERN BARBARIANS IN ANCIENT CHINA.

By W. A. P. MARTIN,
PRESIDENT OF TUNGWEN COLLEGE, PEKING, NORTH CHINA.

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THE Great Wall which forms the northern boundary of China proper tells of a conflict of races. Extending for fifteen hundred miles along the verge of the Mongolian plateau, it presents itself to the mind as a geographical feature boldly marked on the surface of the globe. Winding like a huge serpent over the crests of the mountains, it seems, in the words of Emerson, as if

“The sky
Bent over it with kindred eye,
And granted it an equal date
With Andes and with Ararat.”

It divides two stages of civilization to-day, as it did two thousand years ago. On one side are vast plains unbroken by the plough, and occupied only by tribes of wandering nomads; on the other are fields and gardens, rich with the products of agricultural industry. Between the two, a state of perpetual hostility is inevitable, unless restrained by the power of some overshadowing government. This natural antagonism has never failed to show itself at every point of contact, the world over. Schiller hints—not in his poems, but in a course of historical lectures—that this endless strife of shepherd and cultivator was foreshadowed in the conflict of Cain and Abel. History, unhappily, supplies us with an abundance of illustrations. Egypt fell a prey to the shepherd kings; and in Asia as in Europe, the inhospitable north has always been ready to disgorge its predatory hordes on lands more favored by the sun.

The Chinese of the border provinces were in the earlier ages

compelled to divide their time between war and work, under pain of losing the fruits of their labors. Like the pioneers of the Western continent, they never allowed themselves to be parted from their defensive weapons, and enjoyed life itself only at the price of perpetual vigilance. Experience proved that a line of military posts, no matter how closely they might be linked together, afforded no adequate security against the incursions of homeless wanderers. The Great Wall was built, not as a substitute for such posts, but as a supplement to them. That it served its end there can be no reasonable doubt. So effectually indeed did it protect the peaceful tillers of the soil, that an ancient saying describes it as the ruin of one generation and the salvation of thousands.

From time to time, however, the spirit of rapine, swelling into the lust of conquest, has swept over the huge barrier, as an earthquake wave sweeps over the artificial defenses of a seaport. It was not intended or expected to guarantee the whole empire against the occurrence of such emergencies. Twice has the whole of China succumbed to a flood of extramural invaders: the Mongols under Genghis Khan having been aided in passing the Great Wall in the province of Shansi by the treachery of Alakush, a Tartar chief whose duty it was to defend it; and the Manchus, who are now in possession of the throne, having entered at its eastern extremity, on the invitation of Wu San-kwei, a Chinese general, who sought their aid against the rebel Li Tsze-ch'eng.

Besides the three and a half centuries of Tartar* domination under these two great dynasties, we find, prior to the first of them, three periods of partial conquest. From 907 A. D. to 1234, a large portion of the northern belt of provinces passed successively under the sway of the Ch'itan and Nuchen† Tartars; and, from 386 to 532, an extensive region was subjected to the Tartar hordes of Topa, under the dynastic title of Peiwei. How or where these invaders passed the barrier, it is not worth while to pause to enquire; the foregoing examples being sufficient to show that, in a time of anarchy, some friend or ally can always be found to open the gates. *Chung ‡ che ch'eng ch'eng*, says the Chinese proverb, 'Union is the best bulwark.' Without exaggerating the strength of the Great Wall, which through a large part of its extent is far from being the impos-

* The name Tartar is incapable of very precise definition. Throughout this paper it is applied in a general sense to all the wandering tribes of the North and West.

† 女真 女直, Nuchen or Juchih—also called Kin Tartars. The Manchus claim them as their ancestors, the reigning house having *Áichin* = *kin* 'gold' for its family name.

‡ 衆志成城, 'United hearts form the best of bulwarks.'

ing structure which we see in the vicinity of Peking, we still affirm, in the light of history, that had it been back forces untainted by treason and unweakened by fact might have proved sufficient to shield the country from quest. Wanting these conditions, the wall was powerless defense; and notwithstanding its towns and garrisons, we before us the astounding fact that the Chinese of these northern provinces have passed seven out of the last ten centuries the yoke of Tartar conquerors.

Ascending the stream of history to the dynasty of which ruled China from 202 B. C. to 220 A. D., i. e. for than four centuries—we find ourselves in presence of the conflict. The names of the opposing parties are changed, the parties remain, and the war goes on. The empire conquered by the foreign foe, but it is kept in a state of perpetual terror, by an assemblage of powerful tribes with the collective name of Hiongnu. Bretschneider says they were Mongols *nomine mutato*; but Howorth, in his *History of the Mongols*, pronounces them Turks, or more properly Turcomans, the ancestors of the present occupiers of Khiva, Bokhara, and Constantinople. From the resemblance of this name to *Hunni*, they were formerly supposed the progenitors of the Magyars. So strong indeed was the conviction that, a good many years ago, we had the spectacle of a follower of Louis Kossuth coming to China in search of his "kindred according to the flesh;" actuated apparently by the hope of inducing them to repeat the invasion of England and deliver their brethren from the yoke of the Hapsburgs.

The numerous tribes occupying the vast region extending from lake Balkash to the mouth of the Amoor—diverse in language, but similar in nomadic habits—were in the period combined under the hegemony of the Hiongnu, forming a confederation, or an empire, rather than a single state. The chief was styled in his own language Shanyu, a word which the Chinese historians explain as equivalent to *Hwangti*; there can be no doubt that the haughty emperors of the Han were compelled to accord the sacred title to their barbarous rivals. In recent times, their successors (more properly successors of the Shanyu) have hesitated to concede it to the sovereign of at least one European empire. During the negotiation of the Austro-Hungarian treaty, the Chinese minister objected so strenuously to the assumption of *Hwangti*, that his heir to a long line of Kaisers had to content himself with the first syllable of the title, on the principle that "half a loaf is better than no bread." Had his minister been well versed in Chinese history, what an advantage he might have gained! He would have required no other argument than the fact

the full title had been given to the chief of the Hiongnu to insure its extension to the lord of their modern representatives. For in China a precedent is good for more than two thousand years; and the supposed connection, though not admitted by ethnology, is or was sufficiently reliable for the purposes of diplomacy.

During the Han and succeeding dynasties, the Hiongnu were held in check mostly by force of arms; but the weaker emperors, like those of Rome, were accustomed to send their sisters and daughters across the frontier, instead of generals; flattering the vanity of the barbarians, and replacing military armaments by the sentimentalities of family alliance. The incidents connected with these transactions have supplied rich materials for poetry and romance. For instance, a popular tragedy is founded on the fortunes of Cheo-keun, one of the many fair ladies who were offered as victims to preserve the peace of the borders. The khan of Tartary, hearing of her beauty, demanded her in marriage. The emperor refused to surrender the chief jewel of his harem; so the Khan invaded China with an overwhelming force; but he retired to his own dominions when the lady was sent to his camp. Arrived at the banks of the Amoor, she threw herself into its dark waters, rather than endure a life of exile at a barbarian court. The wars of those times would furnish materials for a thrilling history. The battle-ground was sometimes on the south of the Great Wall, but generally in the steppes and deserts beyond.

As illustrations of the varying fortunes attending the wars of the Hans and the Hiongnu, we may mention the names of Li-kwang, Li-ling, Sze-ma Ts'ien, and Su-wu. The first of these led the armies of his sovereign against the Hiongnu for many years in the latter part of the second century B. C. He had, it is said, come off victorious in seventy battles, when in a final conflict, disappointed in his expectation of capturing the Khan, he committed suicide on the field of battle—though, if we may believe the record, that battle was also a victory. This gives us a glimpse of the style of Hiongnu warfare. They were like the Parthians, "most to be dreaded when in flight." That a general contending with such a foe should destroy himself from chagrin at the results of his seventy-first victory, affords us a fair criterion for estimating the value of the other seventy.

Li-ling, the second of the four whose names I have cited, was son* of the ill-fated Li-kwang, and appears to have been born under still less auspicious stars. Appointed to succeed his father, he suffered himself to pursue the flying enemy too hotly, when, falling into an ambuscade, his vanguard, consist-

* Mayers says grandson.

ing of a division of five thousand men, was cut to pieces before the main body could come to the rescue. Li-ling, with a few survivors, surrendered at discretion. His life was spared; but to take his own description, contained in some of his letters which are still preserved, it was little better than a living death. In addition to the privations incident to a state of captivity among savage foes, he had the bitter reflection that, on account of his supposed treachery, his nearer relations had all been put to death; and that a noble friend who had guaranteed his fidelity had been subjected to an ignominious punishment.

That noble friend was no other than the great historian, Sze-ma Ts'ien. Required by a cruel decree to pay the forfeit of Li-ling's alleged treachery, the historian chose to submit to a disgraceful mutilation, rather than lose his life; not, as he himself says, that he held life dear or feared death, but solely to gain a few years for the completion of his life task, the payment of a debt which he owed to posterity. He lived to place the last stone on his own imperishable monument; and for twenty centuries he has had among his countrymen a name "better than that of sons and daughters."*

Su-wu, the last of the four unfortunates, was a diplomatic envoy. Having, while at the court of the Grand Khan, attempted by undiplomatic means to compass the destruction of an enemy, he was thrown into prison, and detained in captivity for nineteen years. Two tender poems are extant, which he and his wife exchanged with each other on parting, at the commencement of his perilous mission. Whether she survived to welcome his return we are not informed; but in that case she must have died with grief, to see him accompanied by a Turkish wife.

We cannot pause longer among the romantic episodes so thickly scattered through the literature of the Hans. We must travel back another thousand years, to arrive at the last and the principal division of our subject—the Northern Barbarians in Ancient China.

We find ourselves at the rise of the third dynasty, the famous dynasty of Cheo (Chow), which occupied the throne for over eight hundred years (B. C. 1122 to B. C. 255). We are at the dawn of letters; at the dividing line which separates the legendary from the historical period. The Great Wall has no existence, but the hostile tribes are there: not Manchu or Mongol, not Hiongnu, Hweku, or T'ukuih; but the ancestors of all of them, under different names, hovering, like birds of prey, on the unprotected frontiers of a rich and tempting

* He had become a father prior to this disgrace.

country. At this epoch, the Chinese people, who had originated somewhere in Central Asia, were few in number, and occupied a territory of comparatively limited extent. They were distinguished from their neighbors chiefly by a knowledge of letters, and by the possession of a higher civilization. This incipient culture gave them an immense advantage over the barbarous tribes who surrounded them on every side and opposed their progress. These tribes are grouped under several comprehensive terms: those on the east are called Yi; those on the north, Tih; those on the west, Jung or Ch'iang; and those on the south, Man. The original sense of these names seems to be as follows: the Yi were famous archers, and were so-called from their "great bows." The northerners used dogs in hunting and herding, and depended on fire to temper the cold of their rigorous winters; "dog" and "fire" are therefore combined in the ideograph by which the Tih are designated. The Jung were armed with spears, and this their weapon furnished the symbol for their ideograph. The ideograph Ch'iang is made up of the head of a goat and the legs of a man, and so denotes to the Chinese imagination hideous monsters, and at the same time means 'goat-men,' 'goat-herds,' or 'shepherds,' and identifies them essentially with the Tih or nomads of the north. The character for Man combines those for 'worm' and 'silk,' and imports that the barbarians of the south, even at that early day, were not ignorant of silk-culture.

These names and characters all became more or less expressive of contempt, but were without doubt less offensive in their original sense. Marco Polo, who followed the Tartar usage, applies this word Man, in the form Manzi, to the whole of the Chinese people. They were so called as being 'southrons' with respect to the people of Mongolia, and at the same time objects of contempt to their conquerors.

All the tribes of the south and the east, i. e. the Man and the Yi, save certain aborigines called Miao-tsze, were conquered and gradually absorbed and assimilated by the vigorous race whose progeny peoples modern China proper. The Miao-tsze have been able to retain their independence to the present day by taking refuge in the inaccessible fastnesses of mountain chains.

The barbarous tribes of the north and west, however, the Tih and the Ch'iang, were never permanently subdued. This was simply because their lands never invited conquest. Their storm-swept pastures offered the Chinese no adequate compensation for the toil and danger involved in such an undertaking. On the contrary, as we have seen, it was the wealth and fertility of the North China plains and valleys that tempted con-

stantly throughout the eight hundred years of the Cheo dynasty the fierce and hungry tribes of the north and west to make their overwhelming incursions. These are the quarters from which the conquering armies have once and again risen up, like the sands of their own deserts, to overwhelm parts or the whole of the empire. For our purposes, both sets of tribes may be described as barbarians of the north, and it is only on the northwest that the Jung and the Ch'iang have been a source of trouble and danger. The ideograph for Ch'iang, consisting of the head of a goat and the legs of a man, reverses the Greek conception of Pan and the satyrs, and the imagination of the Chinese doubtless pictured their rude enemies as hideous misshapen monsters. The character probably contains, however, a further significance; for, taking the two parts together, it reads simply 'sheep-men,' i. e. 'shepherds,' and this description makes them essentially one with the Tih or dog-using herdsmen and nomads of the north. To repel the aggressions of these troublesome neighbors was the chief occupation of the Chinese armies in the earliest times, as it has continued to be down through all the ages. The oldest extant Chinese poetry, older than any history, shows us the Chinese warrior, like the magic horseman of Granada, with the head of his steed and the point of his lance directed always towards the north as the source of danger. History shows that the princes who were employed to hold these enemies in check generally held in their hands the destinies of the empire. And in this way the northern tribes have exercised for centuries, throughout the third or Cheo dynasty, an indirect, but important, political influence.

To give only two examples, both from the most ancient period of authentic history: The house of Cheo, the most illustrious of the twenty-two dynasties, rose from a small war-like principality in the mountains of the north-west; they were strong by conflict with their savage enemies, and their chief was regarded as the bulwark of the nation. Si-po,* the lord of the west, or Wen-wang, as he is now called, excited by his growing power the jealousy of his suzerain, the last emperor of the second or Shang dynasty, and was thrown into prison by the tyrant, who did not dare, however, to put him to death. In the panic caused by a sudden irruption of the northmen, Wen-wang was set free, and invested with even greater power than he had ever possessed before. To the day of his death he remained loyal; but his son, Cheo-fa, or Wu-wang, employed his trained forces, like a double-edged sword, not only to protect the frontier and drive back the invaders, but

* Mencius says that T'ai-wang, the grandfather of Si-po, paid tribute to the Tartars.

also to overturn the throne of his master, the last Shang emperor.

After the lapse of over eight hundred years, the house of Cheo was replaced by the house of Chin, which had been cradled among the same mountains and made strong by conflict with the same enemies. During the Cheo period (B. C. 1122 to B. C. 255), the barbarians never cease to be a factor in the politics of the empire; not merely making forays and retiring with their booty, but driving the Chinese before them; occupying their lands, and planting themselves in the shape of independent or feudal States, as the Goths and Vandals did within the bounds of the Roman empire. The analogy does not stop here. Like the Roman empire, China had, in the early part of the Cheo period, two capitals: one in the west, near Singan fu (about one hundred miles southwest of the great bend of the Hoang ho), in Shensi; and another in the east, near the present K'aifung fu, in Honan. The former was sacked by the Tartars in 781 B. C., just as Rome was by the Goths in 410 A. D. The story as given by Chinese writers is as follows: The emperor Yiu wang had a young consort on whom he doted. One day it came into his head to give a false alarm to the armies surrounding the capital, merely to afford her an amusing spectacle. Beacon fires, the signal of imminent danger, were lighted on all the hills. The nobles came rushing to the rescue, each at the head of his retainers. Finding there was no real danger, they dispersed in a state of high indignation. The young empress had her laugh; but they laugh best who laugh last, as the proverb has it. Not long after this, the Tartars made a sudden attack. The beacon fires were again lighted; but the nobles, having once been deceived, took care not to respond to the call, lest they should again be making a woman's holiday. The city was taken, and the silly sovereign and his fair enchantress both perished in the flames. However much of the legendary there may be in this narrative, the one stern fact that lies at the bottom of it is the presence of a ferocious enemy whom we call by the general name of Tartars.

After this calamity the heir to the throne removed his court to the eastern capital, leaving the tombs of his fathers in the hands of the barbarians. In the heart of the central plain, and surrounded by a cordon of feudal States, the imperial throne was thought to be secure. But the irrepressible foe was forcing his way to the south and east, with the slow but resistless motion of a mountain glacier. A hundred and thirty years later (about 650 B. C.), we have the spectacle of a barbarian horde in actual possession of the eastern capital, and the emperor a refugee, pleading for reinstatement at the hands

of his vassals. As might be expected, the blame of the catastrophe is again charged on a woman. That woman was a barbarian; and the fact throws a strong light on the position of the contending parties. Her tribe had established itself in the rich alluvial region on the southern bend of the Hoang ho or Yellow river. As enemies they were a standing menace to the capital; as friends they might serve as its janizaries. In order to win their favor and secure their fidelity, the emperor took one of their princesses into his harem. Captivated by her charms, he subsequently raised her to be the partner of his throne. An ambitious kinsman, desirous of supplanting the emperor on the throne, began by supplanting him in the affections of his barbarian wife. Her infidelity being discovered, she was sent back to her kindred, where she was joined by her paramour, who stirred up the powerful clan to avenge an insult done to them in her person. The emperor was easily put to flight; but, wanting the support of the nobles, the usurper's tenure of the capital was of short duration.

Subsequently the barbarians menaced the capital frequently, if not constantly; and the Son of Heaven was more than once compelled to appeal to his vassals for succor. On one occasion his envoys even turned against him, and went over to the enemy, apparently deeming it better to serve a growing than a decaying power. About forty years earlier than the flight of the emperor above mentioned, another barbarian beauty, named Li-ki, played a conspicuous and mischievous role at the court of Tsin, the greatest chief of the vassal States. Taken in battle, she captivated her princely captor, and maintained by her talents the ascendancy which she at first owed to her personal attractions. She induced the prince to change the order of succession in favor of her offspring, thus sowing the seeds of a family feud that brought the princely house to the verge of destruction. Thus, by the cupidity of the Tartars, the treachery of his own envoys, the intrigues of his empress, the throne of one Cheo emperor after another was menaced and shaken, until the dynasty was brought to fall.

Of these immigrant Tartar tribes, no fewer than five or six are mentioned in the Confucian annals as having succeeded in establishing themselves in the interior of China. Two of them (called Red and White—probably, like the Neri and Bianchi of Florence, from the color of their clothing, or of their banners) were settled within the bounds of the present province of Shansi; one in Honan; one in Chili; and two in Shantung. How they effected a settlement is not difficult to understand. In an age of anarchy, when rival States were contending for the hegemony, the great barons found it to their interest to secure the aid of troops of hardy horsemen from

the northern plains, rewarding their service by grants of land. The emperor sought in the same way to strengthen himself against his unruly vassals. And so, at last, by too great dependence on foreign auxiliaries, the empire became unable to shake off its helpers.

How deeply seated was the antagonism between them and the Chinese may be inferred from one or two examples. The emperor being about to despatch a body of those hired auxiliaries to chastise a disobedient subject, one of his ministers warned him against a measure which would be sure to alienate his friends, and strengthen the hands of the common enemy. "If," said the minister, "the prince finds his moral influence insufficient to secure order, his next resort is to make the most of the ties of blood. But let him beware of throwing himself into the arms of a foreign invader." This counsel reminds us of the remonstrance of Lord Chatham against the employment of savages, in the conflict with the American colonies. We may add that India and China both came under the sway of their present rulers through the mistaken policy of depending on foreign auxiliaries.

With the Chinese it was a practical maxim that no faith was to be kept with those invaders; and a terrible vengeance was sometimes taken for the insults and perfidy to which they were subjected.* When one of the barbarian States desired to enter into an alliance with Tsin, doing homage as a vassal, the king at first objected, exclaiming, "the Jung and the Tih have no ties or principles in common with us. We must treat them as our natural enemies." He yielded, with reluctance, when one of his ministers had shown him five good reasons for a contrary course.

Another fact may be cited, which shows at once the power of the barbarians and the horror in which they were held. In the sixth century B. C., the rising civilization of China was on the point of being overwhelmed by them, when a deliverer was raised up in the person of Duke Hwan of Ch'i, who turned the tide at the critical moment, as Theodoric did the onslaught of the Huns under Attila. How imminent was the peril of the empire, and how eminent the merit of the victor, is apparent from a reply of Confucius to some one who supposed that he had spoken disparagingly of Duke Hwan. "How could I disparage Duke Hwan?" he exclaimed; "but for him we should all have been buttoning our coats on the left side," i. e. have been subject to the Tartars.

* 大國不可欺. 'A great State is not trifled with,' is the warning given by a barbarian chief to the prince of Tsin.

CONCLUSION.

Thus far we have occupied ourselves with what we may call an outline of the political relations of the Chinese with the northern tribes in war and in peace. The ethnography of those tribes now claims our attention, if only to show the impossibility of arriving at any satisfactory conclusion. The doubts expressed by the best authorities as to the ethnological relations of the Hiongnu have already been referred to. Conspicuous as they are in history for many centuries about the commencement of the Christian era, it has been much disputed whether they were Turks, Mongols, or Huns. How much greater is the difficulty of identification as we travel back to a period where the torch of history sheds but a feeble ray, or disappears in the vague obscurity of legendary tradition.

In those remote ages the guiding clue of philology fails us. And while a few names that appear in the less ancient literature, such as Hwe-ku and T'u-kuih,* suggest the identity of the tribes that bore them with the Ouigours and Turks, there is absolutely nothing to be made out of the names that meet us most frequently in the earlier records. The vague terms of Jung and Tih, under which were grouped peoples as diverse as the tribes of North American Indians, are always accompanied by some mark of contempt; the character for dog-being prefixed to the one, and incorporated with the other. Hien-yuen, another name of frequent occurrence, has the dog-radical in both its parts, and appears intended to confound the people who bore it with a tribe of apes. It would hardly be expected that writers who deny their neighbors the attributes of humanity should take an interest in depicting their manners or studying their language. Accordingly we search in vain in the earlier Chinese literature for any such precious fragments of those northern tongues as Plautus in one of his plays has preserved of the Carthaginian. They themselves possessed no written speech; and had they possessed it, they have left us no such imperishable monuments or relics of handicraft, as at this day are throwing fresh light on the origin of the Etruscans.

A vast amount of undigested information is to be found in the pages of Matoanlin, relating to the border tribes of the middle ages. But outside the circle of the classics, the only descriptive geography that has reached us from the Cheo period is the Shanhaiking, a kind of Chinese Gulliver, which peoples the world with monsters of every form and fashion.

* Hiongnu, Tukuilh, Hweku, Hienyuen, Huen-yu, Pei Hu, Tah-tah or Tata = Tartar. These are only some of the names that are given in a way more or less vague to the nomads of the North and West.

The older writers, in confounding numerous tribes under one or a few terms, were no doubt influenced by the fact that to them they all appeared under one aspect, that of wandering hunters or shepherds, equally rude and equally ferocious.

No one who gives attention to such subjects can fail to be struck with a two-fold process that takes place in the life of all nations, and most of all in that of nomadic tribes. The first is what we may call the stage of differentiation, through which they pass when, small and weak, they keep themselves isolated from their neighbors, and even their languages diverge in a short time to such a degree as to be mutually unintelligible. The second is the stage of assimilation, when, brought into the collisions of war or the intercourse of trade, each gives and receives impressions that make them approximate to a common type. Thus the barbarians on the north of China present in the earlier ages a boundless variety, which tends with the lapse of time to give place to uniformity of manners, and even of physical features.

Rolling over the plains, as the waves over the sea, their blood has been commingled; and though their names have often changed, their physical type has probably remained unaltered. It is natural to raise the question, What was that physical type? It has not been handed down either in painting or sculpture, and yet I think it is possible for us to recover it. It stands before us to-day, stamped on their descendants of the one hundredth generation. As the Manchu and Mongol are to-day, such were the Jung and the Tih, coeval with Assyria and Babylon. The beautiful Aleuta, the hapless consort of the late emperor, was a Mongol; and more than two thousand years ago, other princes were captivated by the beauty of the daughters of the desert. The barbarians of those times were probably not inferior to the Chinese, in form, feature, or natural intelligence, as their descendants are not inferior in any of these respects. Indeed Chinese, Manchus, and Mongols, as we see them in the city of Peking, are not distinguishable, except by some peculiarity of costume.

Were they originally of one mould, or have the lines of distinction become gradually effaced by the intercourse of ages? The latter is we think the correct hypothesis. The primitive Chinese type, that imported by the immigrants who founded the civilization of China, is, we believe, no longer to be discerned. In the southern and central regions, it has everywhere been modified by combination with the aboriginal inhabitants, leading to provincial characteristics, which the practiced eye can easily recognize. It has undergone, we think, a similar modification in the northern belt. It met here with tribes akin to those of Mongolia, and gradually absorbed them.

This process was going on in prehistoric times. History at its earliest dawn shows us the unassimilated fragments of those tribes; and at the same time discloses a vast movement southward all along the line—checked for a time by the Great Wall, only to be renewed on a more stupendous scale. We have seen how small bodies infiltrated through every channel; we have also seen how, organized into great States, they established in China a dominion enduring for centuries. We are inclined to believe that they have stamped their impress on the people of this region, as thoroughly as the Saxons have theirs on the people of England, or the Vandals theirs on that part of Spain which still bears their name in the form of Andalusia. If you inquire for the influences to which the invaders have in their turn been subjected, we answer that, in all ages, they have exchanged barbarism for such civilization as they found among the more cultivated race.

ARTICLE XII.

ON THE
POSITION OF THE VĀITĀNA-SŪTRA
IN THE
LITERATURE OF THE ATHARVA-VEDA.

By MAURICE BLOOMFIELD,
PROFESSOR IN THE JOHNS HOPKINS UNIVERSITY, BALTIMORE, MD.

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THE following pages contain an attempt to define more exactly than has as yet been done the position of the Vāitāna-sūtra in the literature of the Atharva-Veda. It is based upon a pretty thorough, though not exhaustive, comparison of the Vāitāna-sūtra with the Kāuṣika-sūtra and its commentary by Dārila. On several interesting points I was enlightened by the Ātharvaṇiya-paddhati, a second *paddhati* to the house-ritual of the Atharva-Veda, two modern copies of which, in the possession of the Royal Library at Berlin, I had the privilege of using for my forthcoming edition of the Kāuṣika. As this *paddhati* presents some special points of interest, I give here for the first time a short notice of it.

It differs from the Daṣa karmāni, of which I presented a short sketch at the meeting of the Society in October, 1883,* in that it not merely paraphrases the description of certain sections of the ritual as given in the Kāuṣika, but also comments upon them somewhat independently, occasionally differing from Dārila. After a short introduction, it turns to the *paribhāṣa-sūtras* at the beginning of the Kāuṣika,† then continues with the *ājya-*

* See the Proceedings of that meeting—where may be found also a short notice of the commentary of Dārila.

† The much more important and interesting *paribhāṣas* which are contained in chapters 7 and 8 of the Kāuṣika it does not treat in any way.

tantra (here called *brhatkuçandikā*: cf. the word *kuçandika* in Weber's catalogue of MSS., No. 1253), with its appendix the *uttaratantra*; then it treats the following *saṁskāras*: *garbhādhāna*, *pūṁsavana*, *śimantonayana*, *jātakarman*, *nāmakaraṇa*, *nirṇayana*, *annaprāṇa*, *godāna*, *cūdākarana*, *upanayana* (with *vedāvratā*, *kalpāvratā*, *mṛgāruvratā*!, *viśāsahivratā**), *samāvantana*, *vivāha* with *madhuparka* inserted (as in the *Daça karmāṇi*, *Kāthaka-grhya* and *Mānava-grhya*),† *caturthīkarman* with the *madughamaniprāyaścitta*‡ as appendix, *laghucūlākarman*, *brhacchālākarman*, *çāntyudaka*, *sampatkāma(-karman)*, *pustikāma(-karman)*, *abhicāra(-karman)*, *vṛddhiçrāddha*, *dahanavidhi* (with *asthisamcayana*), *pīṇadāna*, *ṣoḍaṣopacāra*, and *vṛṣotsarga*.

The text quotes the usual Atharvan literature: *Gopatha Brāhmaṇa*, *Vāitāna-sūtra*, *Nakṣatrakalpa*, *Āngirasakalpa*, and the *pariçiṣṭas*; also such stock-books as *Manu* and the *Karmapradīpa*.§ It also cites *Dārila*, and two other commentators, *Bhadra* and *Rudra*, both of whom are elsewhere unknown.¶ It mentions further a *paddhati-kāra* by the name of *Keçava*; an *ācārya* *Upavarṇa* as author of *mīmāṁsā*;¶ a work called the *Pañcāpatalikā* (cf. Böhtlingk's lexicon), and finally *Pāiṭhīnasi*. The latter is cited frequently and familiarly by *Dārila*; and it seems possible that the *smṛti* of *Pāiṭhīnasi* may go back to a *dharma-sūtra* belonging to the Atharva-Veda. Often as this text is cited, no MS. of it has as yet come to light, as I learn from Bühler and Jolly; it would be interesting to find the *Sūtra-ritual* of the Atharva-Veda completed by a *dharma-sūtra*, or some *smṛti* going back to a *dharma-sūtra*. The name of a teacher *Māusalīputra Pāiṭhīnasi* occurs also in *Ath. Pariç. 4. 3* and *17. 13*.

Indian tradition is unanimous in presenting the ritual literature immediately attaching itself to the Atharva-Veda as consisting of five *kalpas*. The *Caranavyūha* (*Ath. Pariç. 49*) presents them in the following order, and under the following names: *nakṣatrakalpa*, *vitānakalpa*, *saṁhitākalpa*, *āngirasakalpa*, and *çāntīkalpa*. The larger *Caranavyūha*, the fifth *pariçiṣṭa* of the White *Yajur-veda*, counts *nakṣatrakalpa*, *vitānakalpa*, *saṁhitākalpa* (with the variant *saṁhitāvidhi*), *vidhānakalpa* (with the variant *abhicāraikalpa*), and *çāntīkalpa*. The *Devīpurāṇa* (cited by Weber, *Ind. Stud. iii. 279*) counts *nakṣatra*, *vāitāna*, *saṁhitāvidhi*, *āngirasa*, and *çānti*. The *Viṣṇupurāṇa* (*iii. 6*; *vol. iii. p. 63* of Hall's edition of Wilson's translation)** knows these *kalpas* by the same name and in the same order as the *Ath. Pariçiṣṭa*. The

* Cf. *AV. xvii. 1-5*.

† See *Proceedings A. O. S.*, loc. cit.; Jolly, *Das Dharmasūtra des Viṣṇu und das Kāthakagrhyasūtra*, *Proceedings of the Munich Academy*, June, 1879, p. 76.

‡ Cf. *Atharva-pariçiṣṭa 37. 9* (MS. or. fol. 973 in the Royal Library at Berlin); cf. *Ind. Stud. v. 404*.

§ Cited as often under the name of *chandogapariçiṣṭa* of *Kātyāyana*.

¶ *dirilo rudrabhadraṇu ca trayas te bhāṣyakārah.*

¶ Cf. *Colebrooke*, *Miscellaneous Essays*, ii. 322.

** Cf. *Gopatha Brāhmaṇa*, ed. by *Rājendraśālamitra*, *Introduction*, p. 5.

Ātharvaṇīya-paddhati also follows the Ath. Pariṣiṣṭa, but substitutes the name *abhicārakalpa* for *āṅgirasakalpa*, and cites the guarantee of the *mīmāṃsā*-teacher Upavarṣa that these are *gruti*, and that there are other *kalpas* which are *smṛti*.* The Vāyupurāṇa (61; p. 526 of the edition in the Bibliotheca Indica) reads: *nakṣatrakalpo vāitānas tṛtīyaḥ saṁhitāvidhiḥ : caturtho 'ngirasah (l) kalpah śāntikalpaḥ ca pañcamah*. In the Mahābhārata, xii. 13258, the five *kalpas* of the Atharva-Veda are mentioned, but their names are not given. In the Bhāgavata-purāṇa xii. 7. 1,† the *kalpas* occur as: *nakṣatrakalpah śāntiḥ ca kṣyapāṅgirasādayah (l)*. In the Mahābhāṣya, there occur together several times the *kalpas* of Kāṣyapa and Kāuṣika (Ind. Stud. xiii. 417, 419, 436, 445, 455). Weber (ibid. 436 and 445) is disposed to see in this Kāuṣika and in the derivative Kāuṣikin the representatives of a Yajus-school; but this passage from the Bhāgavata-purāṇa shows clearly that the Kāuṣika of the Atharva-Veda is meant. But who is Kāṣyapa among the *kalpas*? Can there be any nexus between him and the otherwise authorless Vāitāna-sūtra?‡ The commentary to the Atharva-Veda by Sāyana, which Shankar Pandurang Pandit announced in the London Academy of June 5th, 1880, in the Introduction refers the ritual of the Atharva-Veda to five *kalpas*: *kāuṣika, vāitāna, nakṣatra, āṅgiraśa*, and *śānti*. It adds the interesting statement that these ritual books belong to four of the nine *śākhās* or *bhedas* into which tradition unanimously divides the Atharva-Veda: namely, the Čāunakīyas, the Akṣalas, the Jaladas, and the Brahmanvādas. I find essentially the same statement in the introduction to the Atharva-paddhati: *atharvavedasya nava bhedā bhavanti: tatra caturṣu śākhāsu čāunakādiṣu kāuṣiko 'yam saṁhitāvidhiḥ . . .* A negative corroboration of this statement is to be derived from the relation of the Kāuṣika and Vāitāna *sūtras* to the one other branch of the Atharva-Veda which has come to light, the Kaṣmīra-recension, which calls itself the Pūippalāda; we know that the *sūtras* do not belong to this *śākhā*, from the technical fact that they cite the *mantras* of the Pūippalāda in full instead of citing the *pratīkas*.§ And once the Kāuṣika implicitly confesses itself as *čāunakīya*, in 85. 6, 7, where the opinions of the Čāunakins and Devadarṣins about measurements are confronted; the opinion of the Čāunakins is given last, and is therefore, in accordance with the usual method of the Kāuṣika, to be considered as the

* *mīmāṃsāyām smṛtipāde kalpasūtrādhikaraṇe nakṣatrakalpo vāitānakalpas tṛtīyaḥ saṁhitākalpaḥ caturtha āṅgirasakalpaḥ śāntikalpas tu pañcamah : ete kalpā vedatulya hi 'ti bhagavān (l) upavarṣacāryeṇa pratipāditam : anye kalpāḥ smṛtītulyāḥ.*

† Cf. Gop. Br., ibid. p. 7.

‡ The word *vāitāna* itself is occasionally personified: see Gop. Br., Introduction, p. 4; in the Ath. Paddh. to Kauṣ. 1. 6, the Vāitāna is cited as *čāunakīya-sūtra*.

§ So Kauṣ. 72, 91, 107, 115; Vāit. 10. 17; 14. 1; 24. 1: cf. Roth, Der Atharva-veda in Kaschmir; and Garbe, in the Introduction to the Vāitāna (text), p. vii.

accepted one.* The prevalence of this canon of five *kalpas* is furthermore attested by the compound *pañcakalpa* in the *Mahābhāṣya*; *pañcakalpa* is probably not to be understood (with Weber, Ind. Stud. xiii. 455) as one studying five different *kalpas*, i. e. *ṛgveda-sūtras*, but means an Atharvavedin who is familiar with these five *kalpas*.

The gist of these traditions is therefore as follows: There are five ritual books regarded as *ṛuti*, and they are (if we disregard the crooked order in which they are usually presented):

- I. The *Kāuṣika-sūtra*, known also under the name of *Samhitā-kalpa*, or *Samhitā-vidhi*.
- II. The *Vitāna-kalpa*, or *Vāitāna-sūtra*.
- III. The *Nakṣatrakalpa*.
- IV. The *Ānti-kalpa*.
- V. The *Angirasa-kalpa*, known also as *Abhicāra-kalpa* or *Vidhāna-kalpa*.

Accordingly the statement of Weber, *Indische Literaturgeschichte*, p. 169, is to be corrected. He says, speaking of the *Kāuṣika-sūtra*: "Zu diesem *sūtra* gehören noch fünf sogenannte *kalpa*: *nakṣatra*, *ānti*, *vitāna* [which he does not identify with the *Vāitāna*, mentioned on the preceding page], *samhitākalpa* [which is itself the *Kāuṣika*], und *abhicārakalpa*."

So much for the Hindu juxtaposition of the *kalpas*. To the western student of Indian literature, these coördinated five texts are of very different value. To begin with, the *Angirasa-* or *Abhicāra-kalpa* has, so far as I know, not as yet turned up in Europe. From the character of the references to it, one can safely guess that it is essentially nothing more than a *pariṣiṣṭa* of the *Atharva-Veda*, treating mainly *abhicāra*, or witchcraft; and it would probably be of some value in elucidating the sixth book of the *Kāuṣika*. That the *Nakṣatrakalpa* and *Āntikakalpa* are *pariṣiṣṭas* appears from their titles: e. g. Ch. 110 (Weber's Catalogue, p. 89), *brahmavedapariṣiṣṭam nakṣatrakalpābhidhānam*. In a modern codex of the *Ath. Pariṣiṣṭas*, which Bühler presented

* A still more incisive difference between the various *śakhas* of the *Atharva-Veda* is reported in *Atharvapariṣiṣṭa* 2. 3. 4. The passage describes the rules for choosing the *purohita*. Not only is an adherent of the three remaining Vedas excluded, but even within the *Atharvan* itself those belonging to the *Mānda* and *Jalada śākhās* are rejected, while *Pāippalādas* and *Ānuakīyas* are considered desirable: *na hariḥ pratigṛhṇanti devatāḥ pitaro dvijāḥ: tasya bhūmipater yasya grhe nā 'tharvavid guruḥ. samāhitāṅgapratyangavidyācāraguṇānvitam: pāippalādam guruḥ kuryāt cītrāstrārogyavardhanam: tatha śāunakīnam cā 'pi devamantrapariṣiṣṭam: . . . bahurco hanti vāi rāstram adhvaryur nūcayet sūtān: chandogo dhanam nūcayet tasmād ātharvano guruḥ: ajānād vā pramādād vā yasya syād bahurco guruḥ: deparāstrapurāmātyanāṣas tasya na samūcayāḥ. yadī vā 'dhvaryavām rājā nūcayati purohitaḥ: cāstreṇa badhyate kṣipram parikṣiṇārthavāhanah. yathāi 'va pangur adhvānam opakṣi cā 'ndabhojanam: evaṁ chandogagururṇā rājā vṛddhiṁ na gacchati. purodha jalado yasya māudo vā syāt katham cana: abaddaḥ daḥabhyo masebhyo rāstrabhrāṇām sa gacchati.* Cf. also *Yajñavalkya* i. 312. On the *śākhās* of the *Atharva-Veda* cf. in general *Indische Studien*, i. 296; iii. 277-8; Weber, *Omina* und *Portenta*, p. 413; Roth, *Der Atharva-Veda in Kaschmir*, p. 24 fg; Weber, *Indische Literaturgeschichte*, p. 166; *Rajendralālamitra* in the Introduction to the *Gopatha Brāhmaṇa*, p. 5.

to the Royal Library at Berlin (MS. Or. fol. 973), the Nakṣatrakalpa actually stands at the head, and is counted as the first *pariṣiṣṭa*. Of the Berlin codex of the Āntikalpa I possess a copy, but there is to be found in it nothing of great intrinsic interest; nor does the text add anything to the elucidation of either the Kāuṣika or the Vāitāna. The Nakṣatrakalpa in some of its last sections bears upon a few points in the Kāuṣika. A short summary of both texts is to be found in Weber's Nakṣatra II. p. 392 fg.

The two remaining texts contain ritual *sūtras*, but their relation to one another and to the Atharva-saṁhitā is in many respects different from that of corresponding texts in the *gākhās* of the other Vedas. The doubtful canonicity of the Atharva-Veda (which gains expression in the prevailing designation of the Vedas as a *trāṭṛidyam* or *trayī vidyā*), or at least the patent fact that the hymns of the Atharva-Veda are not well-fitted for employment in the *grāuta*-ritual, has left its stamp on the *grāuta*-literature. This is both secondary and scarce; its only *brāhmaṇa*, the Gopatha Brāhmaṇa, and its *grāuta-sūtra*, the Vāitāna, no doubt belong to the latest products of their respective kinds of literature. They are perhaps merely imitations of the literary conditions in vogue in the *caranas* of the other Vedas. On the other hand, the private life and the private performances of one who adhered to the Veda of incantation and exorcisms naturally were very extensive, bringing in much which was unknown in other Vedic schools; and to this the largest and most important ritual text of the Atharva-Veda, the Kāuṣika-sūtra, owes its peculiarly prominent position among the Atharvan books.

As a rule, the *grhya-sūtras* are dependent upon the *grāuta-sūtras*; the former refer to the latter familiarly, and do not describe a second time performances which have been treated in the *grāuta-sūtra*. So Pārask. i. 1. 4 and i. 18. 1 refers to Kāty. Ār., with the expression *pūrvavat*, 'as above.*' In the collection of the *sūtra-carana* of Āpastamba, in which all religious *sūtras* are united into one work, the *grāuta-sūtra* precedes the *grhya*. Stenzler, in the preface to his edition of the Āg. Gr., p. iii., remarks: "The chief obstacle in the way of a correct understanding of the *grhya-sūtras* lies in the fact that they appear as appendices to the *grāuta*-rules, and presuppose an acquaintance with the *grāuta*-performances."†

Nothing corresponding to this is to be found in the correlation of the Kāuṣika and the Vāitāna. There is no point in which the Kāuṣika depends upon the Vāitāna; on the other hand, the dependence of the Vāitāna upon the Kāuṣika is apparent at almost every step, where the difference of the subject-matter, and the difference between Vedic ceremonial and house ceremonial, allow it. The position of the Vāitāna may therefore perhaps be described as follows: it is not the product of practices in Vedic ceremonies which have slowly and gradually developed in a cer-

* Pāraskara's *sūtra* is called outright Kāṭiya-sūtra, or Pāraskara's Kāṭiya-sūtra.

† Cf. e. g. Āg. Gr. i. 5. 1; iv. 1. 16; 4. 6.

tain school, but probably a somewhat conscious product, made at a time when Atharvavedins, in the course of their polemics with the priests of the other Vedas, began to feel the need of a manual for Vedic practices which should be distinctly Atharvanic. That the Atharvan is poorly fitted for serving as foundation to a Vedic ritual can be seen from the fact that very little that distinctly belongs to its proper sphere (*carmina, devotiones*), and at the same time is not borrowed, or does not at least occur in the *Kāuṣika*, is found in the *Vāitāna*. On the other hand, it contains numerous verses and formulas from the *Yajus-saṁhitās*; and in the description of the ritual it follows very closely *Kātyāyana's* *Ṛgveda-sūtra*. In *Vāit. i. 1. 8*, *devatā havir dakṣiṇā yajurvedāt*, 'the authority for the divinities, the sacrificial material, and the sacrificial reward, is from the Yajur-Veda,' we seem to find formal recognition of this fact. And perhaps it may be taken as a sign of intimacy between the *Vāitāna* and *Kātyāyana*, that the commentary to the latter cites the *Vāitāna* quite frequently, under the names of *Vāitāna-sūtra*, *Ātharvaṇa*, and *Atharva-sūtra* (cf. Garbe, preface to text, p. vi.). On the other hand, the relation of the *Vāitāna* to the *Kāuṣika* may be described by stating that the *Vāitāna* treats the *Kāuṣika* almost as though it were another *saṁhitā*, taking for granted that the ritual of the *Kāuṣika*, and the *mantras* which it quotes from other sources than the *vulgata*, are understood and known by its readers.

The *Vāitāna-sūtra* we possess in an excellent edition and translation by Richard Garbe (text, London, 1878; translation, Strassburg, 1878). Before bringing detailed evidence for the statements made, we may collect here a few addenda and corrigenda, most of which come from sources which were inaccessible to Garbe.

Vāit. i. 19: *jīvābhir* is translated by 'mit jīvāwasser.' *Dārila* to *Kāuṣ. 3. 4* explains *jīvābhir* by *jīvā sthe 'ti catasrabhiḥ*: i. e. 'with the *jīvā*-verses' (*AV. xix. 69. 1-4*).

Vāit. 10. 5: *gandhapravādābhir* is translated 'mit Stoffen welche als wolriechend zu bezeichnen sind.' According to the *Daṣa karmāṇi* to *Kāuṣ. 54. 4*, the *gandhapravādā* *ṛcas* are *AV. xii. 1. 23-25*, all beginning with the words *yas te gandhaḥ*.

Vāit. 24. 3: *apām sūktāir*. The hymns to the waters are given as follows by *Dārila* to *Kāuṣ. 7. 14*: *ambayo yanti, çambhumayo-bhū, hiranyavarṇādayaḥ, kṛṣṇaṁ niyānani, sasruṣir, himavataḥ pra sravanti, vāyoḥ pūta ity apām sūktāni* (*AV. i. 4. 1; 5. 1; 6. 1; 33. 1; vi. 22. 1; 23. 1; 24. 1; 51. 1*).

Vāit. 37. 23: *utthāpanībhir*, 'mit den *utthāpani*-Versen.' According to the *Antyeṣṭikarman* (a *paddhati* on the burial-ceremonies) to *Kāuṣ. 81. 31*, these verses are *AV. xviii. 3. 8, 9; 2. 48; 1. 61; 2. 53; 4. 44*.

Vāit. 37. 24: *harinībhiḥ*, 'mit den *harini*-Versen.' According to the *Antyeṣṭikarman* (*ibid.*), they are *AV. xviii. 2. 11-18*.

The passage *Vāit. 5. 10*, treating of the preparation of the *çintyudaka*, the only one in the text which Garbe finds himself

compelled to leave untranslated, will be explained below, in another connection.

Several of the *pratikas* cited, whose origin was unknown to Garbe,* can be found in the vulgata by the aid of Whitney's Index Verborum: thus, Vāit. 3. 17, *indra girbhīh*, is AV. vii. 110. 3^c; Vāit. 9. 4, *pūrṇā darve*, is AV. iii. 10. 7^c; Vāit. 8. 6, *indrāgnī asmān*, is AV. x. 1. 21^{c,d}; Vāit. 28. 32, *krte yonāu*, is AV. iii. 17. 2^c. The *pratika* in Vāit. 16. 1, *pūṛnam adhvaryo pra bhara*, and the following verse, which is referred to in *sūtra* 2, are probably a modification of AV. iii. 12. 8, 9: *pūṛnam nāri pra bhara*.†

The quantity of material in the Vāitāna which is characteristically Atharvanic is quite small, if we exclude what is shared with it by the Kāuṣika. In Vāit. 1. 1, the demand is made that the supervising priest, the *brahman*, shall be a *brahmavedavid*. The expression *brahmaveda* does not occur in the Kāuṣika; in its place Kāuṣ. 63. 3 and 94. 3, and the Vāitāna itself in 1. 5, have the more archaic *bhrgvangirovid*; and Vāit. 11. 2 still further exhibits the expression *atharvāngirovidam brahmānam*. In the Gopatha Brāhmaṇa and the *pariśiṣṭas*, also, the expression *bhrgvangirovid* prevails;‡ *brahmavedavid*§ probably belongs to a later period. On several occasions, the Vāitāna takes it upon itself directly or indirectly to express the superiority of the Atharva-Veda and its priests. In 11. 2, it does so by giving precedence to the *atharvāngirovid* who shall be chosen as *brahman* (in the technical sense) over the *udgātar*, *hotar*, and *adhvaryu*. This precedence of the Atharvan appears in a more valuable form, because impliedly, in the *mantra*-passage Vāit. 6. 1: the fire compared to a steed is addressed with *taṁ tvā 'dadhur brahmaṇe bhāgam agre atharvānaḥ sāmavedo yajñāṁsi: ṛgbhīh pūtam prajāpatir atharvaṇe 'cvaṁ prathamam nināya*. In the *mantra*-passage Vāit. 37. 2, the *brahman* carries on a petty polemic against the other priests participating in the sacrifice, saying: "You are not a guardian of the sacrifice higher than I; you are not better, more excellent, do not stand above me; you do indeed speak instructively, but you must not place yourself on a level with me." This accords again with the polemical tone of the later Atharvan-literature, especially the *pariśiṣṭas* (cf. the extract from Ath. Pariṣ. 2. 3, 4 above), in which all possible effort, and sometimes virulent language, is expended upon the

* See text, p. 81.

† I have noted the following errata: in the preface to the text, p. vi., read *abhičaresv* etc. 2. 10, instead of . . . 2. 12; text 1. 18, *vag* for *vag*; 2. 1, *brahmān* for *brahman*; 25. 1, *osadhir* for *osastir*; 28. 11, *phāṇṭa* for *pāṇṭa*; 28. 12, *bhāgakt* for *bhagakt*. In the translation, 34. 11, *uccūirghoṣa* for *-goṣa*.

‡ See Gop. Br. i. 2. 24; 3. 1; and, for the *pariśiṣṭas*, Weber, *Omina und Portenta*, p. 346.

§ It is indeed quite obvious that the original *brahman* in Vedic sacrifices was not connected with the Atharva-Veda at all, but was supposed to know the three other Vedas, in distinction from the *hotar*, *udgātar*, and *adhvaryu*, who each knew only one. Thus the *brahman* is fitted for his office of supervisor of the sacrifice, in which he would receive but little aid from a knowledge of the Atharvan: cf. Haug, *Brahma und die Brahmanen*, p. 10; Müller, in the *Journal of the German Oriental Society*, vol. ix., p. xlvii.

task of showing the dignity of the *brahman*-priest and his Veda. Curiously enough, this effort is not restricted to Atharvan-writings; e. g. in the *Mahābhāṣya* the Atharvan consistently receives the first position among the Vedas (Ind. Stud. xiii. 433 fg.); Yājñavalkya, i. 312, demands that the *purohita* shall be acquainted with the *Atharvāṅgirasas*; and even in the *grhya-sūtras* of the Rīg-Veda (Çāṅkh. iv. 10. 3; Çāmbavyagrhya, Ind. Stud. xv. 153; Aṣv. iii. 4. 4), on the occasion of the *tarpanam*, the Atharva-*ṛṣi* Sumantu, whom tradition unanimously designates as the first source of Atharvan-lore,* is honored with the first place in the list of sages. In addition, there is very little Atharvan-material which belongs especially to the Vāitāna: thus, 2. 10, *āsādītesu haviṣṣū 'ktān purastāddhomān juhōti: abhicāresv ābhicārikān*, and 43. 25, *çāunakayaçājño 'bhicārakāmasya*, bring in *abhicāra* in an independent way—moreover, the *çāunaku*-sacrifice is unknown elsewhere. The passage describing the *çāntyudaka*, which will be translated below, also contains a special contribution of the Vāitāna to Atharvan-practices; and Vāit. 1. 3 contains an interesting *paribhāṣā-sūtra*, in which are given the dictates of several Atharvan teachers concerning the expedients which are to be resorted to when no *mantra* is prescribed for an oblation. Further, the Vāitāna quotes independently and in full three hymns of the Kashmir-branch, the Pāippalāda (in 10. 17; 14. 1; 24. 1), just as the Kāuṣika and Gopatha Brāhmaṇa quote hymns and verses of the same version: see Roth, Der Atharva Veda in Kaschmir, p. 23. That the hymns of the vulgata are cited largely, and only with their *pratīkas*, proves nothing for the archaic character of the work; the author of a *grāuta-sūtra* to any Vedic collection, at any period whatever, would observe this practice and the technicalities attached thereto.

As indicated above, the few points mentioned are far from exhausting the materials in the Vāitāna which are characteristically Atharvanic. But those remaining cannot be adduced as testimony in favor of the originality and age of the text, because the Vāitāna shares them with the Kāuṣika.

The points of contact between these two texts in general are very numerous. In the matter of external form, it may be worth noting that the Vāitāna-sūtra proper, which is divided into eight *adhyāyas*, is frequently found extended to fourteen *adhyāyas* by the addition of *prāyaścitta-sūtras*. So in one of the manuscripts which Garbe used in his edition, and in a codex presented to the Royal Library at Berlin by Prof. Eggeling (MS. or. oct. 343). This may have been done in deference to the fourteen *adhyāyas* of the Kāuṣika. The Vāitāna as well as the Kāuṣika frequently begins a chapter with a long *mantra*-passage which belongs to the action of the preceding chapter: so Vāit. 6, 12,† 14, 24; and Kāuṣ. 2, 3, 4, 5, 70, 88, etc. etc. I have not noticed in the Vāitāna the

* Viṣṇupurāṇa iii. 6; Vāyup. 60; Bhāgavatap. xii. 7. 1; cf. Roth, Der Atharva Veda in Kaschmir, p. 26.

† So also Gop. Br. i. 3. 22.

practice, common in the Kāuṣika, of disregarding hiatus produced by *sandhi*: so Kāuṣ. 6. 17, *patnyāñjalāu = patnyū(h) añjalāu*; 6. 34, *dāivateti = dāivata(y) iti*; 17. 3, *talpārṣabham = talpa(y) āṛṣabham*; cf. also the seven cases mentioned by Weber in his *Omina und Portenta*, p. 390, note 3. But both texts (Vāit. 7. 15; 28. 26; Kāuṣ. 87. 23; 88. 29, etc.) have a case of peculiar *sandhi* in the words *pitryupavīta* and *pitryupavītin*.* Each text has once a nominative plur. in *-ayas* employed as accusative: Vāit. 11. 24, *angusthaprabhṛtayas tīra ucchrayet*, 'he shall lift up the first three fingers beginning with the thumb'; Kāuṣ. 8. 19, *trayo-daṣyādayas tīro dadhimadhuni vāsayitvā badhnāti*, 'he ties on the amulet after having kept it in a mixture of sour milk and honey during the three nights beginning with the night of the thirteenth.' The parallelism between *prabhṛtayas tīras* and *-ādayas tīras* is hardly accidental. Both texts frequently introduce *śloka*-passages describing or complementing in metrical form what has been previously described or indicated in *sūtras*. So Vāit. 4. 23 and 9. 12 are introduced by *tad api ślokaṁ vadataḥ*; 19. 20 and 20. 4 and 11 by *tatra ślokaḥ*; 31. 15 by *tad etac chloko bhivadati*; and Kāuṣ. 6. 34 by *athā 'pi ślokaṁ bhavataḥ*; 68. 35 by *tatra ślokaṁ*; 74. 10 by *tad api śloko vadati*. Both texts occasionally refer to the Brāhmaṇa with the phrase *brāhmaṇoktam* or *iti brāhmaṇam*; the Gopātha Brāhmaṇa is not the text referred to. So Vāit. 7. 25, *brāhmaṇoktam agnyupasthānam*, 'the approach of the fire is described in the Brāhmaṇa'; 17. 11, *brāhmaṇoktān ity anubrāhmaṇīnaḥ*, which Garbe translates, hesitatingly, 'the Anubrāhmaṇīn employ the things prescribed in the Brāhmaṇa'; 31. 1, . . . *sattraṁ upayanto brāhmaṇoktena dīkṣeran*, 'those entering upon a *sattra* shall consecrate themselves in the way described in the Brāhmaṇa'; so also the word *brāhmaṇa* in 43. 45. In the same way Kāuṣ. 6. 22, *nā 'dakṣiṇaṁ haviḥ kurvīta: yaḥ kurute kṛtyāṁ ātmanaḥ kuruta iti brāhmaṇam*; 80. 2, *dahananidhānadeṣe parivṛkṣāṇi nidhānakāla iti brāhmaṇoktam*.† So also *brāhmaṇoktam* in 58. 3. The Vaitāna lapses into the broad *brāhmaṇa*-style at the end (43. 46): *ya imāu kalpāv adhīte ya u cāi 'vām veda tena sarvāḥ kratubhir iṣtam bhavati sarvāṅ ca kāmān āpnoti*. This occurs quite frequently in the Kāuṣika: e. g. the long passage 6. 23–28, 67. 3; and especially 73. 28. Both texts employ very frequently the expression *mantroktā*, 'the person or thing mentioned in the *mantra* whose *pratīka* is cited.' So Vāit. 1. 14, *sinīvālī prthustuka iti mantrok-tām*, 'with the verse "O Sinīvālī with the broad braids" he addresses the divinity mentioned in the *mantra*'; 5. 7, *agnīm aṣvatthād iti . . . mantrokte arāṇi grhṇantaṁ vācayati*. So also 11. 15; 30. 27; 31. 4. Very much more frequently this occurs in the Kāuṣika: e. g. *yad yat kṛṣṇa iti mantroktaṁ*, 'with the verse "whatever is black" he does what is stated in

* So also Gop. Br. i. 3. 12.

† Atharvaṇīya-paddhati: *dahanasthāne vṛkṣavarjite deṣe nidhānakāla iti brāhmaṇoktam*.

the *mantra*.' i. e. he polishes the mortar and pestle. So also Kāuṣ. 21. 11; 23. 14; 26. 14; 31. 17, 21; 32. 5, etc. Worthy of note also is the frequent employment of the solemn exclamation *janat* in addition to *bhūs*, *bhuvas*, *sva*. According to the Gopatha Brāhmaṇa i. 1. 8, this is symbolic of the *āṅgīrasa*, i. e. the Atharva-Veda. So Vāit. 1. 3, 18; 2. 1; 8. 3; 17. 4; 18. 17; 30. 15; Kāuṣ. 3. 4; 55. 1; 69. 22; 70. 6; 90. 18; 91. 9, etc. Furthermore, the two texts share many technical terms, which are entirely restricted to the Atharvan-ritual or occur preponderatingly in it. So the *purastūddhoma* and *saṁsthitahoma*, an introductory and a final oblation of melted butter, are peculiar to the Atharva-Veda. They occur also in the Gopatha Brāhmaṇa. The terms *sarūpavatsā*, 'a cow with a calf of the same color as herself,' and its derivative *sārūpavatsam*, 'milk from such a cow,' occur very frequently in the Kāuṣika; the latter occurs also once in Vāit. 12. 14. The terms *sampāta*, 'dregs or residue of an offering,' and *sampātavant*, though not restricted to the Atharva-Veda ritual—they occur also in Gobhila, and are explained in the Grhyasaṁgraha i. 113—occur with especial frequency in the Kāuṣika; in the Vāitāna, 12. 14, we have once *sampātavant*; *sampāta* occurs twice: 31. 25; 32. 7.* The term *ākṛtiloṣṭa*, 'natural lump of mud,'† occurs once in Vāit. 5. 12; it occurs very frequently in the Kāuṣika, as will be seen below. The *ṣāntyudaka* occurs once (5. 10) in the Vāitāna, but very frequently in the Kāuṣika; the latter gives in the 9th chapter a full description of its preparation, which is expanded still further by the *paddhatis*.‡ The peculiar abstract *rasaprācanī*, 'eating of broth,' occurs twice in the Vāitāna (21. 20; 30. 6); once also in the Kāuṣika (21. 19). The word *puṛodāṣa-saṁvarta* in the sense of *puṛodāṣa-piṇḍa* occurs once in each text (Vāit. 22. 22; Kāuṣ. 30. 17). Each text has once the dvandva *yāmasūrasnata* (Vāit. 37. 26; Kāuṣ. 83. 16). Further, the teachers mentioned in the Vāitāna occur in the Kāuṣika, and the designations of *ganās*, 'strings of hymns,' as also of single hymns of prominent character and wide application, and groups of verses, are essentially the same: the *cātanāni*, *apām sūktāni*, *ṣambhumayobhū*, and *āṣāpātīya* hymns, the *gandhapravādā*, *jīvā*, *utthāpanī* verses occur in both texts: see below, p. 386. Finally, there are about sixty passages in the Vāitāna, in which the ritual described shows a more or less close resemblance to performances in the Kāuṣika; the resemblance sometimes amounts to absolute identity, and from that shades off to mere similarity in the arrangement of certain details, in the employment of hymns, etc.§

* Cf. Gop. Br. ii. 6. 1. fg.; Weber, Omina und Portenta, p. 377; Garbe translates *sampātavant* in Vāit. 12. 14 incorrectly by 'welche er (in der Milch von einer eben geschilderten Kuh) zubereitet hat.'

† Dārila fol. 42*, l. 10 (to Kāuṣ. 8. 16): *ākṛtiloṣṭaḥ kṣetraloṣṭaḥ*.

‡ Cf. also Gop. Br. i. 2. 18.

§ The following is a concordance of these passages:

It would certainly be going too far to suppose that the Vāitāna has drawn upon the Kāuṣika for all these numerous correspondences; it is very probable that many of the Atharvan specialties of both texts were simply current in Atharvan-schools, in such a way that they would be at the bidding of the compiler of a religious manual at any time. So there are at present, as far as I know, no means of deciding whether or not the Gopatha Brāhmaṇa is anterior to the Vāitāna, in spite of the many correspondences, which in a number of places rise to absolute identity: Vāit. 2. 15 = Gop. Br. i. 5. 21; Vāit. 3. 10 = Gop. Br. ii. 1. 2; Vāit. 3. 12: Gop. Br. ii. 1. 3; Vāit. 3. 20: Gop. Br. ii. 1. 7; Vāit. 5. 10: Gop. Br. i. 2. 18; Vāit. 5. 18: Gop. Br. i. 2. 18; Vāit. 11. 1: Gop. Br. ii. 1. 16; Vāit. 12. 1: Gop. Br. i. 3. 22; Vāit. 16. 15: Gop. Br. ii. 2. 12, etc. But in looking over the parallels between the Vāitāna and the Kāuṣika, it is found that the Vāitāna frequently exhibits a certain fact or series of facts in a fragmentary way, merely presenting sundry features of a group of facts, which the Kāuṣika exhibits apparently in full. This occurs in so marked a manner that the lesser bulk of the Vāitāna does not suffice to explain it away. The Vāitāna, for example, mentions teachers here and there: Kāuṣika, Yuvan Kāuṣika, Bhāgali, Māṭhara, Çaunaka. There occurs in addition only the expression *ācāryāḥ* (1. 3; 5. 13; 7. 16), which Garbe, following a suggestion of Bühler's, regards

| Vāitāna. | Kāuṣika. | Vāitāna. | Kāuṣika. |
|----------|-----------------------|----------|----------------|
| 1. 1. 5 | 64. 3; 94. 3 | 10. 3 | 8. 13 |
| 1. 11 | 1. 32 | 10. 4 | 88. 16 |
| 1. 13 | 1. 33; 73. 13 | 10. 5 | 13. 12; 54. 4 |
| 1. 16 | 5. 5 | 11. 2 | 64. 3; 94. 3 |
| 1. 19 | 3. 4 | 11. 13 | 82. 11 |
| 1. 20 | 3. 5; 137. 33 | 11. 14 | 24. 28 |
| 2. 2 | 2. 6 | 11. 24 | 8. 19 |
| 2. 4 | 6. 23 | 12. 7 | 57. 5 |
| 2. 5 | 137. 11, 15 | 15. 15 | 3. 4 |
| 2. 6 | 76. 6 | 16. 6 | 23. 1 |
| 3. 5 | 5. 12 | 16. 15 | 57. 5 |
| 3. 12 | 9. 2 | 16. 17 | 6. 1 |
| 3. 20 | 6. 23 | 17. 4 | 108. 2 |
| 4. 7 | 6. 9 | 18. 2 | 62. 1; 68. 17 |
| 4. 11 | 76. 26 | 20. 9 | 88. 29; 89. 1 |
| 4. 13 | 6. 4 | 21. 9 | 68. 6 |
| 4. 22 | 6. 19; 42. 15; 68. 33 | 21. 20 | 21. 19 |
| 5. 10 | 8. 16 | 22. 22 | 30. 17 |
| 5. 15 | 70. 1 | 24. 3 | 7. 14; 140. 17 |
| 5. 18 | 7. 21 | 24. 7 | 6. 11 |
| 6. 11 | 1. 31 | 24. 14 | 40. 10 |
| 6. 12 | 1. 35; 82. 44 | 28. 30 | 20. 1 |
| 7. 4 | 3. 4 | 34. 11 | 16. 1 |
| 7. 6 | 3. 9 | 34. 12 | 16. 7 |
| 7. 15 | 87. 23; 88. 29 | 36. 7 | 17. 1 |
| 7. 20 | 6. 20 | 37. 23 | 82. 31; 83. 23 |
| 8. 6 | 5. 2 | 37. 24 | 82. 31; 83. 23 |
| 9. 4 | 138. 11 | 37. 26 | 83. 16 |
| 9. 8 | 87. 7 | 38. 1 | 97. 7 |
| 9. 20 | 84. 10 | 38. 4 | 88. 29; 89. 1 |
| 10. 2 | 8. 12 | 43. 7 | 4. 18 |

as *pluralis majesticus*, and translates by 'my teacher.' The Kāuṣika has all of these excepting the *ācāryās*, and in addition knows the following worthies: Gārgya, Pārthaṣravasa, Kānkāyana, Paribabhrava, Jātikāyana, Kāurupathi, Iṣuphili and Devadarga. The same superiority of the Kāuṣika is exhibited in the employment of *ganās* (hymn-lists) and verse-lists. The Vāitāna knows the following list of designations, which is approximately exhaustive: the *cātana*, *mātrnāma*, and *vāstospatiya ganās*, the *apānī sūktāni*, the *sampāta*-hymns; the *śambhumayobhū*-hymns, the *madhu-sūkta*, the *ācāpāliya*-hymn, the *sahasrabāhu*-hymn; the *jīvā*, the *gandhapravāda*, the *utthāpanī*, and the *harinī*-verses. The Kāuṣika has all of these, excepting the designations *madhu-sūkta*, *sampāta*, and *sahasrabāhu-sūkta*; and in addition the *brhat* and *laghu-ṣānti-ganās*, the *salila-gana*, the *abhaya-gana*, the *mṛgāra-sūktāni*, the *sāmmanasyāni*, *sāṅgrānikāni*, and *vārcasyāni sūktāni*; the *ṣāntī*-hymn, the *śumbhanī*-hymn, the *sānati*-verses, the *aṅholingā*-verses, the two verses called *ḍig-yukte*, etc. etc. The *paribhāṣā-sūtras* for the Kāuṣika proper are contained in chapters 7 and 8; the first six chapters, treating the *darṣapūrnamāsa*-ceremonies, I think can be proved to be of later origin: or, at least, their conjunction with the parts following has taken place after the bulk of the text was fixed. These *paribhāṣās* find but little application in the Vāitāna; but we have two of the rules practically employed in 10. 2 and 3: *arātīyor iti yūpani vr̥cya mānam anumantrayate* (Kāuṣ. 8. 12: *arātīyor iti takṣati*); *yat tvā ṣikva iti prakṣālyamānam* (Kāuṣ. 8. 13: *yat tvā ṣikva iti prakṣālayati*). The term *ākṛtiloṣa* occurs but once in the Vāitāna; in the Kāuṣika it occurs frequently (8. 16; 21. 2; 25. 7; 37. 8; 60. 15; 69. 11, etc.), and plays a prominent part in its practices, occurring frequently in connection with *valmikalōṣa* or *valmīkavapā*, 'lump of mud with ants:' both of these are mentioned in the *paribhāṣā-sūtra* 8. 16 as *ṣānta*, 'holy.' The *ṣāntiyudaka*, 'holy water,' occurs but once (5. 10) in the Vāitāna, in a passage which in part refers to the Kāuṣika; the latter devotes the ninth chapter to a description of its preparation, and its application is very common in the performances of the personal sacraments (the *samskāras*). Again, both texts have the *upavatsyadbhakta*, 'fast-day-food, eaten on the day preceding solemn sacrifices;' the Kāuṣika, 1. 32, defines it as 'diet from which honey, salt, meat, and beans are excluded.' And the sporadic occurrence in the Vāitāna of the terms *sūrūpavatsa* and *sampāta*, which are so characteristic of the Kāuṣika, testifies to the fact that they are taken from the ritual of that text.

There is, however, stronger evidence than this for the dependence of the Vāitāna upon the Kāuṣika. In several passages, one of which is especially important, the Vāitāna refers to ritual described in detail in the Kāuṣika, indicating merely the first and last traits of the performance: thus, Vāit. 1. 19, *jīvābhir ācamye 'tyādiprapadanāntam*, 'he performs the rite at the beginning of which he rinses his mouth, accompanying the act with utterance

of the *jīvā*-verses, and which ends with the *prapad*-formula; Kāuṣika 3. 4, *jīvābhir ācamyo 'pothāya vedaprapadbhīh prapadyata om prapadye bhūh prapadye bhuvaḥ prapadye svaḥ prapadye janat prapadya iti*.* Again, Vāit. 11. 14: *dakṣiṇenā 'gnīm kaṣipvetyādīvikṣanāntam*, 'south of the fire he performs the rite which commences with the spreading of the cushion and ends with contemplation.' This refers to quite a long passage from the Kāuṣika, 24. 26-31. And in the same manner Vāit. 24. 3, *apām sūktāir ityādyupaspārṣanāntam*, 'he performs the ceremony which begins with bathing, accompanied by the recitation of the hymns to the waters, and which ends with the touching of the water,' refers to Kāuṣ. 7. 14 and 140. 17. And Vāit. 24. 7, *vi muñcāmityādīmārjanāntam*, 'he performs the act which begins with the recital of the mantra *vi muñcāmi* and ends with the act of drying (the face),' refers to Kāuṣ. 6. 11-13.†

Sound as this evidence seems to be at first sight, I confess that I cannot regard it as a final proof that the Vāitāna has in such cases actually borrowed from the Kāuṣika. It might well be possible that we have here ritualistic acts common and familiar in the Atharvan schools reported independently by the two texts, and that it is due merely to difference of style and method that the Kāuṣika reports them in full, while the Vāitāna only sketches their outline. And it is worth noting that the Vāitāna never mentions the Kāuṣika as the source from which these outlines may be filled in. The much stronger evidence which the passage describing the *ṣāntiyudaka* (5. 10) furnishes is therefore welcome. The passage reads: *usasi ṣāntiyudakam karoti cityādibhir ātharvanībhīh kupurvīparvārodakāvṛkkāvātinādānīrdahantībhīh āngirasībhīḥ ca*. Garbe finds himself unable to translate it, and remarks in the critical notes: "For this incurably corrupt passage the unanimous reading of all MSS. is given, as no explanation can be obtained from the Atharvānukramāṇī, out of which I have prepared an index of *ṛṣis* and *devatās*." Garbe is misled by the supposition that the words *cityādibhir ātharvanībhīh*, and the corresponding passage ending with *āngirasībhīh*, refer to certain kinds of hymns. The meaning of the passage becomes clear in the light of the *paribhāṣā-sūtra* Kāuṣ. 8. 16: *citi-prāyaścitti-ṣamī-*

* In the same manner the Vāitāna refers to practices which have been described in its own preceding chapters. So 15. 15, *ācamanādivikṣanāntam*, 'he performs the rite which begins with the rinsing of the mouth and ends with the act of contemplation.' This refers back to Vāit. 1. 19.

† Noteworthy are three other passages, in which ritualistic practices are sketched in the same manner, by giving their initial and final traits; neither Garbe nor myself have found anything in either Vāitāna or Kāuṣika which fills in the outline. They are Vāit. 5. 12, *akṛtīlostetyādyupasthānāntam*; 10. 14, *paṇḍv ānayaī tamityādy ājanāntam*; 16. 15, *haviṣ upavahṛta ityādīvāicvānaro 'gnīstoma ityanatībhīh*. Were there ever other ritualistic *sūtra*-collections in the Atharvan schools?

‡ Dārila comments upon these words as follows: *citiḥ prāyaścitiḥ svacitiḥ prāyaścitiḥ dvandvāḥ tābhyām evamvidhābhyām varāṇena siddhibhāmisthāvaratūlaprasiddhe: metra prāyaścittivīṣaḥ: trīṇi trīṇi sarvaṇi parvaṇi ubhe ṣatamejakāre*. I give the text without emending even the most obvious errors.

camakū-savaṅcā-çamyavākā-talāçā-palāça-vāçā-çinçapā-çimbula-sipuna-darbhā-'pumārgā-'krtiloṣṭa-valmīkavapā-dūrvāprānta-vrīhi-yavāḥ çāntāḥ. This is a list of articles, largely plants, which are considered as holy, and are therefore employed in the preparation of the *çāntyudaka*, 'the holy water.' In the *Vāitāna* they are called *ātharvaṇa*, and are contrasted with the list following, which is called *āngirasa*. This does not occur in the *Kāuçika*. In this case there can be no doubt that the *Vāitāna*, in abbreviating the first list, which does occur in the *Kāuçika*, so as to say 'with the articles *citi* etc.,' and in giving in full the second list, which does not occur in the *Kāuçika*,* confesses itself directly dependent on and later than the *Kāuçika*.

We have finally a technical proof. Both texts follow the usual practice of citing the hymns belonging to the canon of their own school by their *pratīkas*. The *Kāuçika* moreover follows the current method of giving in full any hymns or *formulae solennes* which come from another *çākhā* of the same Veda, as well as from the other Vedas. The *Vāitāna* in general follows the same practice, with one very noticeable exception. Any hymn or formula which occurs in the *Kāuçika* as well as in the *Vāitāna* is cited with the *pratīka* only, it matters not whether the hymn in question occur also in some other *saṁhitā*, or is, as seems often the case, the special property of the *Kāuçika*, not to be found in any of the existing *saṁhitās*. An example or two may illustrate this statement.

The *Tāittiriya-saṁhitā*, iii. 2. 4. 4, has the formula: *ahe dāidhi-ṣavyo 'd atas tiṣṭhā 'nyasya sadane sīda yo 'smat pākatarah.* This is cited in full in the *çrāuta-sūtra* of the White Yajur Veda, *Kāty.* ii. 1. 22. So also *Kāuç.* 3. 5; but *Vāit.* 1. 20 has only the *pratīka*: *ahe dāidhiṣavya.*

Kāuç. 6. 11 has a *mantra*, which *Dārila* designates as *kalpajā*, and which I have not been able to trace in any *saṁhitā*: *vi muñcāmi brahmanā jātavedasum agniṁ hotāraṁ ajaraṁ rathasmr̥tam,* etc. *Vāit.* 24. 7 cites only the *pratīka*: *vi muñcāmi.*

* One may venture to state that the *āngirasakalpa* would bring some explanation of these obscure terms. Compare also *Gop. Br.* i. 2. 18.

ARTICLE XIII.

THE GREEK STAMPS

ON THE

HANDLES OF RHODIAN AMPHORÆ,
FOUND IN CYPRUS, AND NOW IN THE METROPOLITAN
MUSEUM OF NEW YORK.

BY PROF. ISAAC H. HALL,
OF NEW YORK CITY.

Presented to the Society May 6th, 1885.

NEAR an ancient artificial hill called Bamboula,* just outside of Larnaka, in Cyprus, close to the ancient eastern port of Citium, used to be found a number of handles of Rhodian amphoræ, with Greek stamps. Gen. di Cesnola found elsewhere in Cyprus some thirty complete amphoræ of the sort, all with stamps on the handles; besides a number of handles that were broken off. It is well known that such amphoræ, from Rhodes, Cnidus, and a few other places, were chiefly used as packing cases; and they are often called "Rhodian casks," as those from Cnidus are called "Cnidian casks." The height of these Rhodian amphoræ is about 2 feet 6 to 8 inches, and the largest diameter from a foot to fifteen inches. They come nearly to a point at the base; but instead of a point they end in a stout cylinder, an inch or an inch and a half in diameter. The handles are about ten inches high, and extend the whole length of the neck. The mouth is about five inches in diameter.

In their present state, these amphoræ could not hold water; as it trickles through, after the manner of the unglazed coolers of hot climates. They might hold oil, or wine, if coated on the inside with pitch. But remains of figs and other fruit have been found in them, and sometimes salt.

* The hill has recently been leveled to fill up a marsh, for sanitary purposes.

The stamps on the handles vary somewhat in their purport. Sometimes they have the name of the eponym, the name of the (Doric) month, the name of the manufacturer or owner, and an emblem; but they vary so much in the character of their legends that each amphora or handle must be taken by itself. The stamps on the New York objects are either circular or rectangular, but others occur of oval shape. As the general subject has been treated of in various works, I forbear lengthy comment, and give merely the inscriptions, with other special particulars. Where the stamps are impressed so that both can be read as right side up in one position, it is possible to speak of one handle as "right" and the other as "left;" but more frequently, when one is right side up to the spectator, the other is wrong side up. The handles bend above, at an angle either right or slightly acute; and on the top, at each side of the neck, are the stamps.

These stamps are sometimes quite easy to read, but generally somewhat difficult. The salmon-colored pottery of which they are made breaks with a conchoidal or flint-like fracture; so that where a line or letter has been broken off (they are always in relief), its trace is generally left in the surface. The following are the stamps; designating the amphoræ by their present numbers in the Metropolitan Museum of Art.

No. 5055. Rectangular stamps. Raised straight lines between the lines of characters. Right hand stamp, $1\frac{1}{2} \times \frac{1}{2}$ inch. Letters, $\frac{1}{8}$ inch high; in 3 lines.

ΑΝΔΡΟΒΟΥ | ΑΟΥ· ΕΠΙ ΘΕ | ΡΣΑΝΔΡΟΥ

Name of maker or owner, and eponym.

Left hand: stamp of same dimensions. Letters, $\frac{1}{8}$ inch high; in 2 lines. At end of second line is a little square with diagonals.

ΥΑΚΙΝ | ΘΙΟΥ Name of Doric month.

All the nouns are in the genitive; that of the eponym, after *ἐπί*.

No. 5047. Rectangular stamps; no proper right or left.

a. Stamp $1\frac{1}{2} \times \frac{3}{8}$ inch. Letters, $\frac{1}{8}$ to $\frac{3}{8}$ inch high; in 3 lines.

ΕΠΙ ΧΡΥ | ΣΑΟΝΟΣ ΥΑΚ | ΙΝΘΙΟΥ Eponym, and name of Doric month. Here, as in most cases, the Θ has a dot for the cross-bar. One Α has a straight cross-bar; the other, one of V-form. Where not otherwise indicated, the spaces between the words are of my own making. Where dots are printed between the words, they are present on the stamp.

b. Stamp $1\frac{3}{8} \times \frac{5}{8}$ inch. Symbol that is probably the prow of a ship. Letters, $\frac{3}{8}$ to $\frac{1}{4}$ inch high; in 2 lines.

ΔΙΑ ΔΙΟΤΡΕΦ | ΟΥΣ Maker's or exporter's name, in genitive after *διὰ*.

No. 5050. Rectangular stamps; no right or left.

a. Stamp $1\frac{1}{4} \times \frac{1}{8}$ inch. Letters, $\frac{1}{8}$ inch high; in 2 lines, faint and difficult.

ΕΠΙ ΦΙΛΑΡΧΟΥ | ΠΕΔΑΓΕΙΤΝΙΟΥ

Eponym, and name of Doric month.

b. Stamp $1\frac{3}{8} \times \frac{1}{8}$ inch. Letters, $\frac{1}{8}$ inch high; in 1 line; thick and strong.

ΔΗΜΑΡ[ΧΟΥ] Owner's or maker's name.

No. 5045. Rectangular stamps.

Right: $1\frac{3}{8} \times \frac{1}{8}$ inch. Letters, $\frac{1}{8}$ inch high; in 2 lines.

ΜΕΝΕΣΘΕΩΣ | ΣΜΙΝΘΙΟΥ Name of maker, and of Doric month.

Left: $1\frac{3}{8} \times \frac{1}{8}$ inch. One line of letters, $\frac{1}{8}$ inch high.

ΕΠΙ ΑΛΜΑΙΝΕΤΟΥ Eponym.

In top right-hand corner, a symbol that was probably a bull's head; but it may have been a bird.

No. 5046. Rectangular stamps. No right or left.

a. $1\frac{7}{8} \times \frac{5}{8}$ inch. Letters, $\frac{3}{8}$ inch high; in 1 line. Below, an anchor for symbol.

ΔΡΑΚΟΝΤΙΔΑ Owner's or maker's name.

b. $1\frac{7}{8} \times \frac{5}{8}$ inch. Letters, $\frac{1}{8}$ to $\frac{3}{8}$ inch high; in 2 lines.

At the top on the right, the clay was disturbed after stamping, obscuring part of the line. Also, the stamp was either moved or applied twice, making other portions difficult. In the name of the month the N is reversed.

[ΕΠΙ] ΑΡΧΕΜ | ΗΡΟΤΟΥ | ΠΑΝΑΜΟΥ

Eponym, and name of Doric month.

No. 5051. Rectangular stamps.

Right: $1\frac{5}{8} \times \frac{5}{8}$ inch. Letters, $\frac{1}{8}$ to $\frac{1}{4}$ inch high; confused and obscured; in 3 lines.

ΕΠΙ ΕΛΑΧΕ | ΙΝΟΥ ΠΥΝ | ΤΟΜΑ

Eponym, with name of Doric month. In line 2 the A is upside down, and line 3 is turned *boustrophedon*.

Left: $1\frac{3}{4} \times \frac{3}{4}$ inch. Letters, thick, $\frac{1}{4}$ inch high; in 1 line.

ΑΡΤΙΜΑ Owner's or maker's name.

No. 5041. Circular stamps. No right or left.

a. $1\frac{1}{4}$ inch outer diameter. Letters, $\frac{1}{8}$ inch high; in circle. In the centre, the conventional symbolic rose.

ΙΙΙΗΟΚΡΑΤΕΥΣ Owner's or maker's name.

b. $1\frac{1}{8}$ inch outer diameter. Letters, in circle; $\frac{1}{8}$ inch high. Conventional rose in the centre.

ΕΠΙ ΞΕΝΟΦΑΝΤΟΥ ΑΡΤΑΜΙΤΙΟΥ

Eponym, with name of Doric month.

No. 5060. Circular stamps, each $1\frac{1}{4}$ inch in outer diameter. No right or left. Inside of each, the conventional rose. Letters, in circles; $\frac{1}{8}$ inch high.

a. ΙΙΙΗΟΚΡΑΤΕΥΣ Owner's or maker's name.

b. ΕΠΙ ΘΕΑΙΔΗΤΟΥ ΠΑΝΑΜΟΥ

Eponym, with Doric month.

No. 5058. Rectangular stamps. No right or left.

a. $1\frac{1}{2} \times 1\frac{1}{4}$ inch. Emblem, a long spit or obelus, with an object at the point like an uncial or manuscript *omega*, probably a double hook (flesh-hook or grapple?), and a lapidary Σ at the handle. Below, 1 line of letters, $\frac{1}{8}$ inch high, confused by applying the stamp more than once.

Δ ΡΑΚΟΝΤΙΔΑ Owner's or maker's name.

b. $1\frac{1}{2} \times \frac{5}{8}$ inch. Three lines of letters; letters, $\frac{1}{8}$ to $\frac{3}{16}$ inch high. Of last line, only the tops of the letters are impressed.

ΕΠΙ ΑΡΙΣΤ | ΡΑΧΟΥ | ΣΜΙΝΘΙΟΥ

Eponym, with Doric month. In line 2, the P and A are transposed, as here copied.

No. 5052. Rectangular stamps. No right or left.

a. $1\frac{1}{2} \times 1$ inch. Letters in two lines; $\frac{1}{8}$ to $\frac{3}{8}$ inch high.

ΕΠΙ ΑΙΞΙΝΑ | ΑΡΤΑΜΙΤΙΟΥ

Eponym, and name of Doric month.

b. $1\frac{1}{2} \times \frac{1}{2}$ inch. One line of letters; above, a thyrsus for the symbol.

ΣΤΑΣΙΚΑΕΥΣ Owner's or maker's name.

No. 5061. Rectangular stamps. No right or left.

a. $1\frac{1}{2} \times \frac{3}{4}$ inch. Letters in 2 lines, $\frac{1}{8}$ to $\frac{3}{16}$ inch high. At end of line 2, emblem, probably a pomegranate and its twig.

ΠΟΛΥΡΑ | ΤΟΥ Owner's or maker's name.

b. $1\frac{1}{2} \times \frac{5}{8}$ inch. Three lines; letters, $\frac{1}{8}$ to $\frac{3}{16}$ inch high. Part of line 1 obliterated.

ΕΠ . . . ΔΑΥ | ΕΡΟΤΙΔΑΣ | ΠΑΝΑΜΟΥ

Eponym, probably with patronymic, and name of Doric month.

No. 5057. Rectangular stamps. No right or left.

a. $1\frac{1}{2} \times \frac{5}{8}$ inch. Letters in 3 lines; $\frac{1}{8}$ inch high; a little confused by stamping more than once.

ΕΠΙ ΑΡΙΣΤΑ | ΝΟΥ | ΤΑΚΙΝΘΙΟΥ

Eponym, and name of Doric month.

b. $1\frac{1}{2} \times \frac{3}{4}$ inch. Letters in 1 line; $\frac{3}{16}$ inch high. Below, emblem of a thyrsus.

ΕΥΚΑΕΙΤΟΥ Owner's or maker's name.

No. 5039. Rectangular stamps. No right or left.

a. $1\frac{1}{2} \times \frac{5}{8}$ inch. Letters in 3 lines; $\frac{1}{8}$ inch high.

ΕΠΙ ΤΙΜΑ | ΓΟΡΑ | ΔΑΛΙΟΥ

Eponym, and name of Doric month.

b. $1\frac{1}{2} \times \frac{5}{8}$ inch. Letters in 2 lines; $\frac{1}{8}$ inch high. Below, a symbol, probably the prow of a ship.

ΝΟΜΑΡΧ | ΟΥ Owner's or maker's name.

No. 5063. Rectangular stamps. No right or left.

a. $1\frac{1}{2} \times \frac{3}{4}$ inch. Letters, 1 line; $\frac{1}{8}$ to $\frac{3}{16}$ inch high. Below, emblem of thyrsus; and bunch of grapes, with leaves.

ΜΙΔΑ Owner's or maker's name.

b. $1\frac{1}{2} \times \frac{1}{2}$ inch. Letters, $\frac{1}{8}$ to $\frac{3}{16}$ inch high; in 2 lines. Emblem

difficult to make out, but most like a thick amphora pierced by a feathered arrow.

ΕΠΙ ΑΡΙΣΤΟ | ΓΕΝΕΥ Εponym. As the whole stamp is not impressed, it would seem that a third line contained the name of the month.

No. 5043. Rectangular stamps.

Right: $1\frac{3}{8} \times \frac{5}{8}$ inch. Letters, $\frac{1}{8}$ to $\frac{3}{16}$ inch high; in 3 lines, the last very poorly impressed.

ΕΠΙ ΕΡΜΟΥΣ | ΑΛΕΞΙΔΑ | ΑΡΡΙΑΝΙΟΥ

Eponym, with patronymic, and name of Doric month.

Left: same stamp as No. 5058, *a*.

No. 5065. Rectangular stamps.

Right: $1\frac{1}{2} \times \frac{1}{2}$ inch. Letters, $\frac{1}{8}$ to $\frac{3}{16}$ inch high; 2 lines, emblem of a trident.

ΗΦΑΙΣΤΙ | ΩΝΟΣ Owner's or maker's name.

Left: $1\frac{3}{4} \times \frac{1}{4}$ inch. Letters, $\frac{1}{8}$ inch high; in 4 lines.

ΕΠΙ ΑΝΘΩΠΙΟ | ΝΕΥΣ | ΔΕΥΤΕΡΟΥ | ΠΑΝΑΜΟΥ

Eponym, with name of Doric (intercalary) month.

No. 5044. Rectangular stamps.

Right: $1\frac{1}{2} \times \frac{5}{8}$ inch. Letters, $\frac{1}{8}$ to $\frac{1}{4}$ inch high; in 3 lines.

ΕΠΙ ΔΑΜΑΙ | ΝΕΜΟΥ | ΑΡΡΙΑΝΙΟΥ

Eponym, and name of Doric month.

Left: $1\frac{1}{2} \times \frac{3}{8}$ inch. Letters, $\frac{3}{8}$ inch high; one line. Above, emblem of thyrsus.

ΙΜΑ Owner's or maker's name.

No. 5053. Rectangular stamps. No right or left.

a. Same stamp as No. 5063, *a*.

b. $1\frac{3}{4} \times \frac{5}{8}$ inch. Letters, $\frac{1}{8}$ inch high; in 3 lines.

ΕΠΙ ΑΡΙΣΤΟ | ΓΕΝΕΥΣ | ΠΑΝΑΜΟΥ

Eponym, with name of Doric month.

No. 5067. Rectangular stamps. No right or left.

a. $1\frac{1}{2} \times \frac{5}{8}$ inch. Letters, $\frac{1}{8}$ to $\frac{3}{16}$ inch high; in 3 lines.

ΕΠΙ ΣΩΣΙ | ΚΑΕΥΣ | ΠΑΝΑΜΟΥ

Eponym, and name of Doric month.

b. $1\frac{3}{8} \times \frac{5}{8}$ inch. Letters, $\frac{1}{8}$ to $\frac{3}{16}$ inch high; in 1 line. Below, a thyrsus for emblem.

ΣΤΑΣΙΟΙΚΟΥ Owner's or maker's name.

No. 5054. Rectangular stamps. No right or left.

a. Same as No. 5063, *a*.

b. $1\frac{3}{4} \times \frac{5}{8}$ inch. Letters, $\frac{1}{8}$ inch high; in 3 lines.

ΕΠΙ ΑΡΙΣ | ΤΟΚΑΕΟΥΣ | ΑΡΤΑΜΙΤΙΟΥ

Eponym, with name of Doric month.

No. 5066. Rectangular stamps.

Right: $1\frac{3}{8} \times \frac{1}{2}$ inch. Letters, $\frac{1}{8}$ inch high; in one line. At end, a wreath, apparently of olive.

ΑΜΙΝΤΑ Owner's or maker's name.

Left: $1\frac{3}{4} \times \frac{1}{2}$ inch. Letters, $\frac{1}{8}$ to $\frac{3}{16}$ inch high; in 3 lines.

ΕΠΙ ΞΕΝΟΦ | ΩΝΤΟC | ΤΑΚΙΝΘΙΟΥ

Eponym, and name of Doric month. The *omega* and *sigma* in line 2 are of uncial form.

No. 5050. Circular stamps, poorly impressed, and circumference not on the clay. Conventional rose in centre of each. Letters, $\frac{1}{8}$ inch high.

a. ΕΠΙ ΑΜΦΙΛΟΧΟΥ (but instead of ΑΟ it is almost as easy to read ΑΡ). Eponym. Part of the stamp is illegible.

b. Only Δ*ΜΑΡ . . . is visible, and that not certain.

No. 5062. Rectangular stamps.

Right: $1\frac{1}{2} \times \frac{1}{8}$ inch. Letters, $\frac{1}{8}$ to $\frac{3}{16}$ inch high; in 3 lines, partly illegible.

ΕΠΙ Α | ΘΙ . . . ΔΕΤΤΕΡΟΥ | ΠΑΝΑΜΟΥ

Eponym, with name of Doric (intercalary) month.

Left: $1\frac{1}{8} \times \frac{3}{4}$ inch. Letters, $\frac{1}{8}$ to $\frac{1}{4}$ inch high; in one line. Also, emblem, probably a ship's prow.

ΚΑΛΛΙΟΝΟΣ Owner's or maker's name.

No. 5042. Circular stamps, each $1\frac{1}{2}$ inch in diameter; with conventional rose in the centre. Letters, $\frac{1}{8}$ inch high.

a. ΕΠΙ ΤΙΜΑΣΑΓΟΡΑ ΠΑΝΑΜΟΥ

Eponym, with Doric month.

b. ΕΠΙ ΦΙΛΟΚΡΑΤΕΥΣ

Also an eponym, in form.

Not numbered, 1. Circular stamps; one all gone except some unintelligible traces. The other too faint to do more with than read the name in the circle (whose diameter cannot be determined).

ΕΠΙ ΦΙΛΟΚΡΑΤΕΥ

(Nothing but a point or boss in the centre.)

Eponym. The *epsilon* has the uncial form.

Not numbered, 2. Circular stamps, each $1\frac{1}{2}$ inch in diameter, and with conventional rose in centre. Letters, $\frac{1}{8}$ inch high.

a. ΑΝΘΟΞΙΠΠΙΔΑ Owner's or maker's name.

b. ΕΠΙ ΛΕΟΝΤΙΔΑ ΔΑΜΟΚΑ

Eponym, with perhaps the father's name added.

No. 5049. Rectangular stamps, each $1\frac{1}{4} \times \frac{1}{2}$ inch.

Right: Letters, $\frac{1}{8}$ to $\frac{3}{16}$ inch high; in 2 lines. Upper line only partly impressed; and ends of the lines obscure.

ΑΓΓΙΑΝΙΟΥ | ΕΠΙ ΦΙΛΟΔΑΜ[Α]

Eponym, with name of Doric month preceding.

Left: ΦΙΛΑΙΝΙΟΥ Owner's or maker's name.

No. 5048. Circular stamps, almost like those of No. 5050.

a. Rose in centre; letters illegible.

b. ΕΠΙ ΑΜΦΙΛΟΧΟΥ Eponym. The name of the month was probably there, but is now illegible. Letters of the uncial type.

No. 5059. Rectangular stamps.

Left: $1\frac{1}{4} \times \frac{3}{4}$ inch. Letters, $\frac{1}{8}$ to $\frac{3}{16}$ inch high; in 3 lines. Stamp impressed more than once, making the reading difficult.

ΑΥΤΟΚΡΑ | ΤΕΥΣ | ΤΑΚΙΝΘΙΟΣ (or perhaps the last letter is τ, but Σ is the apparent reading in the present confusion).

Eponym, with name of Doric month; and the latter in the nominative, if the apparent reading is correct.

Right: $1\frac{1}{2} \times \frac{1}{2}$ inch. Letters, $\frac{1}{4}$ inch high; in one line; with emblem, a bunch of grapes (or ear of grain?).

ΣΤΑΥΤΟΣ Owner's or maker's name.

No. 5040. Rectangular stamps, each $1\frac{1}{2} \times \frac{5}{8}$ inch.

Right: Letters, $\frac{1}{8}$ inch high; in one line; beginning destroyed by disturbance of the clay before baking. Emblem, a dolphin and a pomegranate.

[ΗΓ]ΗΣΙΠΠΟΣ Owner's or maker's name, in the nominative.

Left: Letters, $\frac{1}{8}$ inch high; in 3 lines.

ΕΠΙ ΦΙΛΑΣΑ | ΓΟΡΑ | ΠΑΝΑΜΟΥ

Eponym, with name of Doric month.

Those that follow are upon broken-off handles.

1. Circular, $1\frac{1}{4}$ inch in diameter. Rose in centre. Letters, $\frac{1}{8}$ inch high.

ΕΠΙ ΞΕΝΟΦΑΝΤΟΥ ΣΜΙΝΘΙΟΥ

Eponym, and Doric month.

On the side of the handle is a small square stamp with the letter Β, $\frac{1}{4}$ inch high, made with straight lines and angles, instead of curves.

2. Rectangular, $1\frac{1}{2} \times \frac{1}{2}$ inch. Symbol at one end, a double cornucopia, or else the double pileus of the Dioscuri. Below, a bipennis. Letters, $\frac{1}{8}$ inch high; in one line.

ΜΙΝΟΘΕΜΙΟΣ Owner's or maker's name.

3. Rectangular, $2 \times \frac{1}{2}$ inch. Symbol like the fluke of a modern anchor. Letters, $\frac{1}{8}$ to $\frac{3}{16}$ inch high; in 2 lines.

ΗΡΑΚΛΕ | ΩΝΟΣ Owner's or maker's name.

The *omega* is of the uncial form, but upside down.

4. Circular, $1\frac{1}{2}$ inch in diameter, with conventional rose within. Letters, $\frac{1}{8}$ inch high.

ΔΑΜΟΚΡΑΤΕΥΣ Owner's or maker's name.

5. Circular, $1\frac{1}{2}$ inch in diameter; only a point or boss in centre. Uncial characters. Probably the same stamp as the first of the non-numbered amphoræ preceding.

ΕΠΙ ΦΙΛΟΚΡΑΤΕΥΣ

Eponym.

The style of the letters on the stamps is not modern, nor extremely ancient. More commonly the ends of the strokes have cross-pieces, like our ordinary capitals. Uncial and lapidary forms occur together; frequently on the same stamp. One in-

stance above has a specimen of *boustrophedon*; but that is no indication of antiquity when on a stamp. The letters are generally of elegant form. In the case of the *alpha*, the straight and the V-shaped cross-bar occur in the same stamp.

The Doric genitive in *-α* appears frequent; and the termination in *-εϋς* appears also as a genitive.

A majority of the twelve (or thirteen) Doric month-names appear on these stamps. The same maker's or owner's name, and the same stamp, appear in conjunction with different eponyms, on different amphoræ. As to age, I can scarcely conjecture; but it would seem that most of the amphoræ were neighbors, both in age and in place of manufacture.

AMERICAN ORIENTAL SOCIETY.

Proceedings at New Haven, October 23d, 1878.

THE autumn meeting was held, as usual, in the Library of the Divinity School, the President in the chair. The Recording Secretary being absent, his duties were performed by the Librarian and Treasurer.

On the recommendation of the Directors, the following persons were elected Corporate Members of the Society:

Mr. Henry Johnson, of Brunswick, Me ;
Mr. William O. Sproull, of Cincinnati, O.

Communications were presented as follows:

1. On certain Sepulchral Monuments of Southern India, by Prof. John Avery, of Brunswick, Me.

There are found in various parts of Europe, in northern Africa, and in western Asia, certain ancient stone monuments of peculiar construction. They are built of enormous slabs or bowlders of uncut stone, weighing in some instances hundreds of tons, and poised upon one another with incredible labor. There is an almost complete absence of inscriptions or other marks upon them by which their builders might be identified. That they were designed to mark the resting places of the dead, and were not temples of the Druids, as many early observers supposed, is not doubtful. In the silence of history, and of all but the faintest tradition regarding their age and the men who raised them, our best evidence is their contents. These are, besides burnt and unburnt human remains, pottery—mostly of a rude pattern—stone, flint, and iron implements, and in a few cases coins of Roman emperors. The latter, if not secondary deposits, prove the comparatively recent construction of some of the monuments.

As we go eastward from Syria and Circassia these megalithic remains abruptly cease, and are replaced in the broad tract between Arabia and Eastern Iran by microlithic structures. When, however, we reach the valley of the Cabul, the western forms reappear; and if we cross the Indus, and pass to the south of the Vindhya range, we come upon a region where all the principal varieties of megalithic remains occurring in Europe may be counted by hundreds. The resemblance is not merely general, but embraces small details of form and contents. Besides the question of their age and builders, this unexpected and striking coincidence raises the inquiry whether the men who built the Indian monuments were kindred to those who constructed similar tombs in the West. In reply to the first question it may be said that the Aryan Indians did not build them, for no remains of the sort are found in the region longest occupied by them. We must conclude, then, either that the present natives of southern India are the descendants of the dolmen-builders, or that the credit of their construction belongs to some prior population which has since disappeared. But as there is no evidence from other sources of such an earlier settlement, we regard the first supposition as more probable. In confirmation of this view, it appears that some of the rude tribes among the mountains at the present day, not only connect their funeral rites with the ancient monuments but construct new ones of the patterns which are believed to be the latest-developed of the series, namely, the open dolmen and the stone

circles. In some instances a long stone placed in the dolmen suffices to represent the deceased. In regard to age, if these examples are a genuine survival of a wide-spread custom, we must believe that the monuments represent an unbroken series running back from the present to a past of which we cannot assign a limit. Whether there is any family connection between the builders of these monuments and those of the West cannot be confidently decided, but the indications of it deserve attention. The agreement in peculiar details of construction and mode of burial, which could hardly have been accidental; the probable immigration of the Dravidians from central Asia, and the existence of similar remains in the Cabul valley; the affinity of the south-Indian languages to those of the Turanian family; and the hints that members of this family settled Europe before the arrival of the Aryans, are suggestions of a connection which future researches may develop into certainty.

Dr. Ward added remarks on similar monuments in Palestine.

2. On Tentative Linguistic Forms, by Prof. C. R. Lanman, of Baltimore, Md.

Professor Lanman pointed out that a schematic or tabulated statement of the inflective forms of a language generally represents all forms as equally common and definite. In fact, however, some cases are of exceedingly infrequent occurrence. Thus, the dative plural neuter of the Sanskrit *a*-declension occurs but once in the whole Rig-Veda, while the nominative singular masculine occurs over 10,000 times.

A systematic collection of all the forms of noun-inflection in the Riksanhita shows that in the most rarely occurring cases there is often a corresponding uncertainty respecting the form. In some instances, where a very unfamiliar form is required by the circumstances, or by the needs of grammatical concord, the difficulty is evaded outright, by making, for example, a masculine adjective agree with a neuter noun. In other instances, we see attempts to make the form in accordance with one or another analogy of the language; but one poet makes it in one way, and another in another.

These phenomena of uncertain and wavering linguistic usage may be properly termed tentative linguistic forms. Thus, there is occasion for the use of the nominative-accusative singular neuter of stems in *r* about nine times in the Rig-Veda; and, as it would seem, there are three and perhaps four different forms, or attempts to make case-forms, to meet the emergency. Each of these trial-forms was equally well adapted for the expression of the relation intended; each was doubtless equally well understood; and each is the result of an individual act of human attribution. As time went on, one form became generally accepted, to the exclusion of the others. Here then we see an illustration of the fact that language is as it is "by convention" rather than "by nature," as well in the domain of inflection as in that of name-giving.

3. On Female Education and the Legal Position of Women in China, with a translation of a Chinese primer for girls, by Prof. S. Wells Williams, of New Haven.

This communication was designed to show that the highest education which could be obtained had always been as open among the Chinese for girls as for boys, and that the laws of the land had distinctly defined the legal rights of women. It gave an extract from Luhchau, a modern writer on female education, describing the plan adopted in the twelfth century before Christ for teaching the ladies in the palace their lessons; and introduced several references from the Book of Odes, indicating the condition of women in those periods of Chinese history. One of these extracts showed their equality with their husbands; another their privilege in time of harvest to glean in the fields; and a third the refusal of a lady of high rank to fulfill a betrothal, because her fiancé had not sent all the required presents and paid her all the respect that etiquette required.

From these scattered notices it could be seen that the legal standing of women, especially their marital rights as now defined in the *Ta Tsing Liuh-li* or Statutes of the present Manchu dynasty, was greatly owing to the teachings of those early

times. Stress was laid on the equal position of the wife and mother in the ancestral worship as tending to maintain their rights in society in those relations; and a synopsis of those rights was given, taken from chapters 100 to 117 inclusive. These chapters contain rules to be observed in contracting and completing a marriage, reasons for divorce, list of marriages which are *per se* null, and penalties for false or forced marriages.

The existence of many works specially designed for teaching women was referred to, and an extended notice of one authoress given. This was Pan Hwui-pan, sister of Pan Ku, historian of the Early Han dynasty, whose unfinished annals she completed about A. D. 80, after his death. Her treatise on female education was written for the young empress, whom the emperor Ho espoused and committed to her training. It has been the model and incentive for after writers, both male and female, who have extended the range and number of works specially designed for the benefit of young ladies. One of these writers, named Luhchau, was prefect of Canton, and in his *Female Instructor*, written in 1712, he pays a high compliment to the Lady Pan's treatise. One mode of honoring the memory of distinguished women common among the Chinese—that of erecting honorary gateways of carved stone and placing them in thoroughfares and cities, with suitable inscriptions—was adverted to as a proof of the regard paid to the sex.

These remarks were preliminary to the main part of the paper, which was a translation of the primer entitled the *Nü-yü*, or Words for Women and Girls. It was printed anonymously in 1838, and without any preface, by a book-store called the Evening Incense Arbor, well-known perhaps to those who are conversant with Chinese publishers; but no town is mentioned. It has 228 lines, mostly in tetrameters, containing 967 characters; and as many of them are repeated, the labor of memorizing the whole primer is not very great, and is much aided by the rhythmical form. Its instruction is chiefly moral, beginning with household duties, and proceeding thence to advice concerning frugality, hospitality, and the respect due to seniors and a husband's relatives. The obedience due to him and his parents is insisted on, and then directions follow as to the proper mode of governing a family, the nurture of children, and conduct towards neighbors and friends. The little book closes with a comparison between the discreet, courteous, and educated mother and wife, and the slatternly gad-about, who is disliked and despised by everybody.

4. On the Dispersion of the Semitic Peoples, by Prof. T. C. Murray, of Baltimore, Md.

The object of the paper was to present the philological evidence as to the home and the dispersion of the Semitic peoples. 1. North Semitic. The dialects of the North Semitic peoples seemed to point to a common place of departure—the lower Euphrates valley, in whose neighborhood they for a time dwelt together. Their successive emigrations, as reflected in their dialects, were discussed at some length. 2. South Semitic. The philological evidence of the South Semitic, sifted in a similar manner, was found to indicate that northern Arabia was their common centre. 3. The comparison of the two branches of the language was minutely traced up, and it was concluded that the linguistic evidence gives us ground to believe that Arabia was the immediate home of this family of languages, and that in the classical Arabic we have, on the whole, the fairest representative of the original Semitic speech.

5. On the Relation in the Rig-Veda between the Palatal and Labial Vowels (*i, î, u, u*) and their corresponding Semivowels (*y, v*), by Mr. A. H. Edgren, of New Haven.

Dr. Edgren began with pointing out the difference between the Vedic dialect and the classical Sanskrit in regard to the treatment and occurrence before dissimilar vowels of *i, u* or *y, v*: the semivowels being alone found (by conversion or otherwise) in the classical language, but the two vowels being of very frequent occurrence, as proved by metrical evidence, in the Veda. There seems to be, at first glance, a great confusion and lawlessness in the use of either in the Rig-Veda, but a careful examination of the whole field shows beyond doubt that,

whatever share arbitrary usage and corruption of the texts may have in the varied occurrence of vowel or semivowel, it is in the main of organic nature, and gives additional support to the theory that the semivowels in question are only later developments of the more primitive vowels *i* and *u*, and that we meet in the Rig-Veda with a transitional state. Dr. Edgren then tried to demonstrate by an exhaustive statistical account of all cases in the Rig-Veda in which *i*, *ī*, *u*, *ū* or *y*, *v* occur before vowels, that the more primitive sounds had been retained as a rule, or prevailing, wherever they occurred at the end of a word or stem, and thus helped to preserve the individuality of the word; and, on the other hand, that the semivowels are found to prevail in all combinations the original independence and significance of which were dimmed and forgotten (as in derivative and especially inflectional suffixes, and in radical elements). The whole subject was considered under three different heads: 1. The treatment of final *i* *ī* *u* *ū* of words or themes before dissimilar vowels; 2. the occurrence of *i* or *y*, *u* or *v* in formative elements; and 3. their occurrence in the radical part of the word.

1. In the collocation of words in sentences, *i* and *u* are retained almost without exception. In 1294 verses chosen from all the Maṇḍalas, *i* and *u* occur together 391 times, *y* and *v* only 6 times (in *prāty*, *ānv*, *sddho*). An examination of a number of other passages confirmed the fact that only a few such less independent words as prepositions have begun to show a tendency to convert into a semivowel the final *i* or *u* before a dissimilar vowel. In compounds the case is nearly the same. Final *i* and *u* occur altogether in 553 instances, but their corresponding semivowels only 52 times; and it is especially the prepositions *ati*, *abhi* which convert their vowels. Two words (*gavyūti*, *ṛitv*) occur not less than 39 times of the 52, but at least the former of them (*gavyūti*) is of doubtful formation. In noun-stems ending in *i*, *ī*, *u* or *ū*, the *i* (*ī*) is retained in 392 instances, but consonantized in 240 instances; and the *u* (*ū*) is retained 285 times, but consonantized 241 times (chiefly, or 110 times, in the two forms *mādhvas*, *vāsvas*). If each stem alone be considered, the difference in the occurrence of vowel or semivowel is much more marked, the vowel (*i* or *u*) being found then about twice as often as the semivowel. In both cases, the final long vowel is preserved more tenaciously than the short: the *ū*-stems, indeed, never consonantizing *ū* before a vowel-ending; and further, thematic *i* (*ī*) is found to occur mostly after a long, and *y* after a short syllable. In verb-roots the final *i*- and *u*-vowels are generally combined with the following vowel through the medium of *guna*-strengthening or the insertion of a semivowel, less frequently by conversion of the final. The vowel *i* is retained in 51 instances, the vowel *u* never.

2. Of the formative elements, the derivative suffixes were taken up first; and of them the suffix *-ia* (*-ya*) is by far the most frequent. The form *-ia* occurs 2033 times, and *-ya* 1628 times. There are 47 words which are found in different passages with both forms, *-ia* and *-ya*, but as a rule even these show very pre-eminently one of the forms (in two thirds of the cases it is *-ia*), and the exceptionally used termination is in one half of the instances a *ἄπαξ λεγόμενον*. In connection with these statistics were considered certain attendant phenomena helping to prove that the occurrence of *-ia* or *-ya* is not arbitrary, but depends on the organism of the word. Thus *-ia* is found with very few exceptions wherever the suffix has the circumflex. Further, a long syllable is followed in 189 simple words (in 41 of which the suffix has the circumflex) by *-ia*, and in only 37 simple words (all without the circumflex) by *-ya*. A short syllable is followed in 85 simple words (in 45 of which the suffix has the circumflex) by *-ia*, and in 98 simple words (in 12 of which the suffix has the circumflex) by *-ya*. Finally, in regard to their derivation, words clearly derived from a theme in *-a* (as *gāṇia* from *gāṇa*) take almost invariably the suffix-form *-ia*. Of 110 such derivatives, there are only 8 absolute exceptions to the rule. Next in order, all the other formative suffixes containing an *i* or *y* or *u* or *v* were considered, and it was shown that the concurrent phenomena of a preceding long or short syllable and a subsequent vowel or semivowel respectively is clearly traceable everywhere, more absolutely so in regard to *u*, *v* than in regard to *i*, *y*. In declensional endings the vowel *i* is found altogether 128 times, and the semivowel *y* nearly 4800 times. Even here the preservative influence of a preceding long syllable seems traceable, the vowel occurring in 123 instances (out of 128) after a long

syllable. In verb-inflection, the semivowels are found almost exclusively, the exceptions being: *ia* as a class-sign 5 times, as a tense-sign once, in optatives 95 times; *u(a)* in a class-sign 6 times, in a personal ending 12 times, and in various forms of the root *dhanu* (perhaps as a class-sign) 14 times.

Finally, the occurrence of the vowels or semivowels in question in roots or in the radical part of words was considered; and it was shown that the semivowels are found with comparatively few exceptions (chiefly *tua-* and *śuar*) in the great mass of such words. The exceptions are: *i* in verb-roots 27 times, in pronominal roots 29 times, in more uncertain combinations 71 times; *v* once doubtfully in the verb-root *śuad*, in pronominals several hundred times, owing to the frequency of the form *tua-*, in more uncertain combinations 244 times, mainly in the word *śuar* (233 times) and its compounds.

6. On the Vedic Compounds having an apparent Genitive as prior member; by Mr. Maurice Bloomfield, of Baltimore, Md.; presented by Prof. Lanman.

There are in the Rig-Veda seven compound nouns, the second part of which is the noun *pāti*: namely, *gn̥d's-pāti* with its feminine *gn̥d's-pāntī*, *jā's-pāti* with the abstract *jāspatyā*, *bṛ'has-pāti*, *rāthas-pāti*, *vānas-pāti*, *śubhās-pāti*, *sādas-pāti*. It is seen that in every case the first part of the compound ends in *s*, and that they have double accent. By looking at the connections and surroundings of these compounds, it will likewise appear that they are old formations. For instance, *śubhās-pāti* occurs 17 times in five books, always as epithet of the Aśvins; *vānas-pāti* is not only used to designate 'tree,' but also has the meaning of 'sacrificial post,' 'pole of a wagon,' in dual 'mortar and pestle,' etc., which can only be explained by assuming that the meanings of the component parts had quite faded out when the words were thus used. *Gn̥d's-pāti* and *gn̥d's-pāntī* are evidently old; they occur only in connection with *Tvashtar*, and such a feminine as *gn̥d's-pāntī* would be impossible from a newly-coined word. These compounds have been most commonly explained by regarding some of them as genitive compounds and the rest as formed with *s* by false analogy. This is not satisfactory; for there are no genitive compounds in the Veda, and it would be hard to assume such with *pāti* alone. Besides, that would not account for the double accent. Other explanations are still less to be approved. I suggest hesitatingly: 1. that the *s* before *pāti* as well as the difficult *σ* of *δεσπότης* and *δεσποῖνα*, which I would connect with *gn̥d's-pāti* and *gn̥d's-pāntī*, be explained as a trace of *spa*, a more ancient form of the root *pd*; 2. that the double accent be regarded as an attempt on the part of the compilers of the Veda to account for the *s*. In connection with this it will be well to remember that the compilers have constantly mistaken *ulokā* for *u* and *lokā*, even where this division would place the enclitic at the beginning of a *pāda*; also the very faint traces which are found of the fuller form of the root *kar*, namely, *skar*. Besides this, the assumption of the root *spa* as an older form of *pd* would furnish us with the simple root from which *spak* is formed by the root-determinative *k*, like *dark* (*dṛc*) from *dar*. To this the meaning of *pd* is also favorable, if we simplify the common signification of 'protect' into 'overlook,' 'oversee.' It would also account for the fact that two roots *pd*, often coinciding in form, have meanings so hard to bring together as 'drink' and 'protect.'

After the reading of these communications, the Society adjourned.

Proceedings at Boston, May 21st, 1879.

The Society assembled as usual, in the American Academy's library, Dr. N. G. Clark, Vice-President, in the chair.

The Treasurer reported the receipts and expenditures of the year to be as follows :

RECEIPTS.

| | | |
|--------------------------------------|-----------|-------------------|
| Balance on hand, May 29th. 1878, | - - - - - | \$1,502.19 |
| Annual assessments paid in, | - - - - - | \$430.00 |
| Sale of the Journal, | - - - - - | 18.75 |
| Interest on deposit in Savings bank, | - - - - - | 74.03 |
| Total receipts of the year, | - - - - - | \$522.78 |
| | | \$2,024.97 |

EXPENDITURES.

| | | |
|-------------------------------------------------|-----------|-------------------|
| Printing of Journal and Proceedings, | - - - - - | \$655.37 |
| Paper, | - - - - - | 151.90 |
| Current expenses of Library and Correspondence, | - - - - - | 19.50 |
| Total expenditures of the year, | - - - - - | \$827.27 |
| Balance on hand, May 21st, 1879, | - - - - - | 1,197.70 |
| | | \$2,024.97 |

The Librarian reported the receipt of 41 volumes, 38 parts of volumes, and 33 pamphlets, besides a parcel of over 300 volumes of missionary publications from the American Board of Commissioners for Foreign Missions. The whole number of titles of printed works now in the Library was 3580 ; of manuscripts, 144.

The Committee of Publication announced that the completion of volume X of the Journal was still delayed by the unexpected length of the concluding article, now and for some time past in the hands of the printers, but that some progress had already meantime been made in the printing of the first part of volume XI.

The Directors gave notice that the autumn meeting would be held in New Haven in October next. Also, that they had voted to levy no assessment on the members for the ensuing year. On their proposal and recommendation, were duly elected as Corporate Members,

Prof. C. A. Briggs, of New York ;
 Prof. S. I. Curtiss, Jr., of Chicago ;
 Mr. J. G. Larkin, of Boston ;
 Mr. Bernadotte Perrin, of Hartford.

In the absence of the Corresponding Secretary, Mr. Van Name, his substitute, read some extracts from letters received during the past half year.

Prof. Isaac H. Hall writes from Philadelphia, May, 1879 :

" With regard to the account of a Syriac manuscript of the New Testament, discovered by me at Beirût [see Proceedings for October, 1877: Journal, vol. x., p. cxlvii.], Dr. Ceriani has written me from Milan in correction of my report of his statement ' that some of the Church-lesson notes in the MS. were only found else-

where in the Ambrosian Peshito codex.' I find now on looking at his former letter that I had not read it rightly. He had written, speaking of the dividing of Paul's epistles continuously into sections as one book: 'Eandem notam sectionum non vidi in aliis libris editis; sed eadem occurrit in MS. Bibl. Ambrosianæ.' This I faultily read as 'easdem notas lectionum . . . sed easdem occurrunt,' etc., and took it to refer to the Church-lesson notes. The fault was wholly mine, and I avail myself of this first opportunity to correct it."

The Secretary further communicated the names of members deceased since the last annual meeting, speaking briefly of the character and services of each. They were as follows:
the Corporate Members,

Mr. Elihu Burritt, of New Britain, Conn.;
Prof. T. C. Murray, of Baltimore, Md.;

the Corresponding Member,

Dr. Otto Blau, of Odessa, Russia;

and the Honorary Member,

Prof. Garcin de Tassy, of Paris.

Mr. A. W. Tyler, lately librarian of Johns Hopkins University, being present, was invited to speak of his colleague, Professor Murray, with whom he was personally intimate, and paid an appropriate tribute to his character as a man, his scholarly enthusiasm, and his remarkable attainments as a student of the Semitic languages.

The election of officers for 1879-80 being next in order, the following persons, proposed by a Nominating Committee, were balloted for, and chosen without dissent:

President, Prof. E. E. SALISBURY, LL.D., of New Haven.

Vice-Presidents, Rev. N. G. CLARK, D.D., of Boston; Hon. PETER PARKER, M.D., of Washington; Rev. T. D. WOOLSEY, LL.D., of New Haven.

Recording Secretary, Prof. EZRA ABBOT, LL.D., of Cambridge.

Corresponding Secretary, Prof. W. D. WHITNEY, Ph.D., of New Haven.

Secretary of the Classical Section, Prof. W. W. GOODWIN, Ph.D., of Cambridge.

Treasurer and Librarian, Mr. ADDISON VAN NAME, of New Haven.

Directors, Messrs. J. W. BARROW and A. I. COTHEAL, Prof. CHARLES SHORT, LL.D., and Rev. W. H. WARD, D.D., of New York; Prof. W. H. GREEN, D.D., of Princeton; Prof. A. P. PEABODY, D.D., of Cambridge; Prof. J. H. THAYER, D.D., of Andover.

Communications were now called for.

1. On the Elision of initial *ā* after final *e* and *o* in the Vedas, by Prof. John Avery, of Brunswick, Me.

The phonetic law of the classical Sanskrit which requires the dropping of initial *ā* after final *e* and *o* does not hold for the ancient language. In regard to the Rig-Veda, a careful examination of the text gives the following results: Of the 4457 instances where the letters named occur in the position stated, the *ā* is not

elided in 3451, or about 77 per cent. With 15 exceptions (i.62.7; 71.2: iii.9.4; 33.2²; 38.8: vii.21.8; 70.4; 72.3; 103.3; 104.15: viii.9.15: ix.39.5; 81.5: x.79.1) these cases are found within a *pāda*, or at the beginning of the second half-verse, in which latter position *ā* is never elided. Of the 1006 instances of the loss of *ā* from the text, 655 occur at the beginning of a *pāda*; and this may be any *pāda* excepting the first one of each half-verse. The remaining 351 cases are found within a *pāda*—a situation where *ā* is usually retained. In 181 of these (351) instances *ā* is followed by *v*. Though as a rule *ā* is lost when followed by *v*, there are some exceptions. It is never lost within the *pāda* when followed by *vy*. The semi-vowel *y* does not seem to especially cause the elision of *ā*, as stated by Benfey. Though initial *ā* is dropped from the text 1006 times, it was evidently pronounced in nearly every case when the hymns were composed, as is shown by the metre. In 71 cases only is the line complete without the restoration of the *ā*. In 31 of these instances the lost *ā* is the augment, and in all but 4 the word stands within the *pāda*. The verses are: i.24.8; 30.16; 33.13; 51.3.5; 52.9; 59.2.3; 79.11; 85.7; 103.7; 118.7; 162.7; 186.8: ii.23.16; 26.6: iii.29.3: iv.1.12; 10.7; 16.18; 55.1: v.29.10; 30.3.10; 31.3; 61.9; 83.10: vi.22.4; 25.3; 27.5; 44.19; 47.22; 50.10: vii.1.19; 33.11; 57.5; 66.5; 71.5; 86.4: viii.2.40; 13.15; 27.22; 50.8: ix.59.4; 86.23: x.7.5; 53.1; 56.3; 75.2; 79.6; 85.17; 88.9; 90.3.12; 92.11; 95.6; 97.23; 99.7; 103.1; 109.1; 116.6; 126.3; 127.1; 129.3; 145.6; 161.5; 166.3.4; 190.1: Vā. 3.10; 10.3. Hence, in the Rik, in only about 1.6 per cent. of the cases where initial *ā* follows *e* or *o* is the former really lost. The following table shows the loss by books:

| | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | Total. |
|---------------------------------|----|-----|------|-----|----|-----|------|-------|-----|----|--------|
| The <i>ā</i> an augment..... | 9 | 0 | 1 | 1 | 5 | 2 | 1 | 1 | 2 | 9 | 31 |
| The <i>ā</i> not an augment.... | 5 | 2 | 0 | 3 | 4 | 1 | 5 | 3 | 0 | 17 | 40 |
| Total..... | 14 | 2 | 1 | 4 | 9 | 3 | 6 | 4 | 2 | 26 | 71 |

Though the augment is often dropped in the Vedas, there are many instances where it is retained even after *e* or *o*. The Sāma-Veda gives nearly the same facts as the Rik. Of the 600 occurrences, *ā* is elided 144 times—119 times at the beginning of a *pāda*, and 25 times within it, in 15 of which *ā* is followed by *v*. In three instances only is *ā* really dropped—all within a *pāda* (2.6,1,2,2; 2.7,2,4,2; 2.9,3,1,1). The proportion of real to apparent loss of *ā* is in the Rik 1: 13, in the Sāman 1: 47. In the White Yajur-Veda, taking that part which is composed in the seven usual Vedic metres, the proportion of real to apparent loss of *ā* is 1: 4. The proportion for this Veda as a whole is much greater if we count the syllables according to the metrical scheme applied to prose as well as poetry by the schools of the Brāhmanic age. In the metrical parts of the Atharva-Veda, as has been shown by Prof. Whitney (Ath. Prāt., iii.54 note), the ratio of real to apparent loss is 1: 2½; that of real loss to real retention is 1: 4½.

The usage in the Vedas as a whole may be summarized as follows: 1. *ā* after *e* or *o* is regularly, and with few exceptions, dropped in writing at the beginning of a *pāda*, when that is not at the head of a half-verse; 2. it is regularly retained within a *pāda*, though exceptions are not infrequent, especially when it is followed by *v*, but never when the *v* is followed by *y*, unless at the beginning of a *pāda*; 3. elided *ā* is generally to be restored in reading; 4. a steady increase of frequency in the actual dropping of *ā* can be discerned from the earliest to the latest Vedic texts.

2. On a copper stamp bearing a Greek inscription, by Prof. F. P. Brewer, of Grinnell, Iowa; read by the Recording Secretary.

A copper stamp with Greek letters was brought from eastern Asia Minor, by Rev. George White, a missionary, who still has it in his possession at Chester, Iowa.

The stamp is an oblong, 9 x 6 cm., with a copper ring for a handle at the back, and weighs about three hundred grams. The face contains fifteen letters, in three lines, surrounded by a border; reversed, as they would appear when stamped on anything, they are as follows:

Α Ψ Η Ο Ι
C I O Y K
Δ Ι Ο Ν Υ

Beginning with the lower line, we can read *Διονυσίου καρποί*, 'crops of Dionysios.' I have never seen such a stamp before. That the inscription should begin at the lower line is, as I imagine, a mere blunder of the workman. The stamp was apparently used for branding boxes or barrels of grain, or possibly for impressing the clay-seal of store-rooms.

It is believed to be an antique. The letters ΑΚC are ancient forms for ΑΚΣ. The head of the P is small, and turned the wrong way.

3. Pre-historic Revelations among the Nile-dwellers, by Prof. T. O. Paine, of Elmwood, Mass.

This article was accompanied with a roll of thick paper mounted on cloth, one foot wide and twenty-eight feet long, giving an exact reproduction, in black and scarlet, of vignettes of the Turin Papyrus of the Book of the Dead or Funeral Ritual, enlarged thirty-six times, including always the running heading in scarlet and black hieroglyphs, enlarged on the same scale. The author translated the opening words of the heading thus: "The beginning of the chapters concerning the going forth on the day of the Resurrection of the worthy in *Khernuter*. Was said on the day that the coffin went in, after the going forth, by" [the name of the departed being here inserted]. The Roman type is put for the rubric, and the italics for the black.

The author then pointed out that the line of vignettes, or, as he has named the pictorial heading, the Panorama, below this reading, perfectly illustrates the text above it. Hence, to the people or forefathers of pre-historic Egypt it was revealed that the resurrection took place before the coffin was carried into the sepulchre.

The first individual in the Panorama is the departed, in his human form, dressed in the robes of the Makher, pronounced true, with his hands on his breast, and looking forward in his first surprise on entering the new world. The two in front of him have thrown up their hands in joy and praise at having reached the new world a little before him. The two and the one make three—the hieroglyphic, pictorial plural. These are men; and they represent all men who have just and recently entered the future world. Immediately in front of these three men—this multitude of men—are three women: the multitude of women recently arrived in the new world from earth. Immediately in front of these are three other women, facing them—facing towards the right, the two other threes facing towards the left. This second trio of women are taller than the first, and the first of the second three women is the tallest of the six women, and even taller than the men. She is also greeting the three women just arrived from earth. That is, the multitude of women already in the other life are come to receive the multitude just coming from earth; while the women from earth are in like attitude greeting the women who have come to receive them. Here ends the first portion of the Panorama; and here ends the corresponding portion of the black and red heading.

Next follows the Panorama of the funeral procession, showing the coffin, the sacred *seshia* or Mystery, the boat, etc. And over this portion are the words concerning the carrying of the coffin in, that is, into its place in the sepulchre. The author here called attention to the fact, that, setting aside his translation of the hieroglyphic heading, the Egyptians do thus and so represent in picture. He then said that the text of the heading was utterly simple, and perfectly explained or declared the nature of the Panorama; and that the great text underneath the Panorama reveals the fact that man rises into the other life with all his faculties: "He sees as ye see; he hears as ye hear; he stands as ye stand; he sits as ye sit." Also, the Panorama pictures men as men, and women as women. The

entire book treats of just what the first words of the heading declare as the subject—the resurrection of the worthy. The resurrection of the unworthy is not the subject; and the unworthy are spoken of only as opposed to the worthy—as the crew of the Devil or *Set*, who take the form of beasts, serpents, etc., and who go to the place of the *Nemra* or Destruction. The author therefore proposed a new name for the whole work, taken from the heading itself, given by the Egyptians of old: THE HAMROU, 'The Beginning of the Chapters:' comparing *Breshith*, 'In the Beginning,' the Hebrew name for Genesis. He said that *Todtenbuch*, 'The Book of the Dead,' presents people as dead, whereas the Hamrou is 'The Book of the Resurrection of the Worthy,' and thus presents people hereafter as alive. That the Book of the Dead is a modern name, while the Hamrou, or Book of the Resurrection of the Worthy, is a name full of a living faith, both pictured and expressed in writing of a pre-historic date, or date not known. He said that he had written out twelve papers of translations from the Hamrou, illustrating in minute detail nearly the entire Hamrou text.

4. On the Contest between Bel-Merodach and the Dragon, by Rev. W. Hayes Ward, of New York.

Dr. Ward called the attention of the Society to a remarkable Babylonian cylinder in the possession of Dr. S. Wells Williams, of New Haven, which evidently contained a representation of the struggle between Bel-Merodach and the Dragon, but which differed from all other ancient representations known in that the dragon was figured as a serpent. He pointed out the fact that on another cylinder the temptation of man seems represented as accomplished by a serpent, and he suggests that these cylinders seem to show that there existed in early Babylonia a version of the fall of man and the subsequent punishment of the tempter, parallel in its form with that given in Genesis. He reserved a fuller discussion for a subsequent meeting.

5. On recently discovered Hittite Inscriptions, by Dr. Ward.

Dr. Ward remarked that as new inscriptions in the hieroglyphic of Hamath had been discovered, he had exhibited copies of them to the Society. He had lately received from Professor A. H. Sayce a copy of a long and important, though fragmentary, inscription, obtained by George Smith from Jerablus, the ancient Carchemish. It seemed to be now sufficiently established that these inscriptions are in the character of the ancient Hittites, and should be called by their name. The inscriptions thus far found at Carchemish, the famous old Hittite capital, show a large number of new characters, quite doubling the number gained from the Hamath inscriptions. They do not exhibit any relation to the hieroglyphics of Egypt on the one hand, or to those of primitive Babylonia on the other. The area covered by them is now greatly enlarging, and it is probable that antecedent to the introduction of the Phœnician alphabet they had a considerable currency over Asia Minor, Syria, and certainly as far as the Euphrates river to the east. Professor Sayce thinks he has evidence that one or two of the characters are used as determinatives.

6. On the use of Gold and Silver among the Assyrians, by Rev. Selah Merrill, of Andover, Mass.

Since the Hebrew is very closely allied to the Assyrian, its usage of the words for 'gold' and 'silver' may serve as an illustration of some points of the subject which this paper is designed to consider. The Hebrew has six words meaning gold, viz: כָּזָב (two forms), זָהָב (Chald. זָהָב), חָדָד, כָּסֶף, כָּסֶף, כָּסֶף. Of these, כָּזָב is used three times; כָּסֶף only twice in the Bible, once meaning 'gold' and once 'caul'; כָּסֶף and כָּסֶף are used nine times each, and generally denote 'pure, or fine gold'; חָדָד is rendered 'gold' six times, namely, in Ps. lxxviii. 13 and Zech. ix. 3, and four times in Proverbs. There is no special reason why the last should be called, as has been done by some scholars, a "poetical Hebrew word for gold." It appears to belong to the later literature, yet it corresponds to *hurasu*, the word for gold in Assyrian. זָהָב, the remaining word, is used between three hundred and four hundred times.

The Hebrew had but one word for silver, כֶּסֶף, which occurs several hundred times. The same word is found also in Chaldee and Syriac. The three northern Semitic languages, the Hebrew, Aramaic, and Assyrian, are in perfect harmony in the use of the word כֶּסֶף for silver, while the southern Semitic languages use other words to designate this metal. There is some evidence that among the Hebrews, and among the Assyrians also, pieces of silver, in very early times, were stamped and used as currency.

Of eighty-three cases where gold and silver are used in connection, the order of the words in eleven cases is 'gold and silver,' while in seventy-two the order is 'silver and gold.' These seventy-two are distributed among twenty-five books, and the eleven 'gold and silver' are distributed among nine books. The book of Psalms has one 'gold and silver' against four 'silver and gold;' Ezra, no 'gold and silver' against six 'silver and gold;' Daniel, two 'gold and silver' against four 'silver and gold.' In the New Testament, of nine cases noted, three have the order 'gold and silver,' and six have it 'silver and gold.' In the Old Testament, an examination of the context in the eleven cases concerned brings to light no reason why the order should be 'gold and silver.' The following conclusion is arrived at: the Hebrews, in the use of these words, had a rule, which was that 'silver' should precede 'gold.' But there is no apparent reason for the rule; moreover, it was not invariable, for among eighty-three cases there are eleven exceptions, with no traceable reason for the exception.

In Assyrian, 'gold' and 'silver' are generally expressed by the Accadian signs, BARBAR = *kaspu*, and GUSKIN = *hurasu*. The Accadian determinative for the precious metals is KU, rendered in Assyrian by *il-lu*, or *el-lu*, corresponding to the Hebrew כָּלֵל, and signifying 'exalted, illustrious,' and hence 'precious' of metals. The words are also written phonetically: *hu-ra-su* or *hu-ra-si*; and *ka-as-pu*, or *ka-as-pi*, or *kas-pi*. The Accadian characters are often followed by the sign denoting the plural. *Hurasu* is often followed by the words *ru-us-sa-a*, 'beaten,' and *hu-se-e*, 'pure;' while *kaspu* is followed by *nam-ri*, 'shining,' or *e-ib-bi* (var. *ib-bi*, *ib-bu*), rendered 'white' or 'fine.' We have further *ka-sap*, meaning 'a piece of money;' *sad. kaspu*, which Hincks, Norris, and Oppert agree in referring to 'silver mines;' and the custom of weighing silver mentioned in the phrase *kaspa i-sa-kal*, 'silver he weighs.'

In one hundred and eleven cases noted, the order of the words is as follows: thirty-eight have 'gold and silver,' while seventy-three have 'silver and gold.' In Assyrian, as in Hebrew, the rule seems to be for the order 'silver and gold;' but there is a much larger number of variations from this order in the Assyrian than in the Hebrew. There is, however, no apparent reason for this order, nor on the other hand for the variation from it.

A large number of inventories of valuable articles were given where 'silver' precedes 'gold,' and of others where 'gold' precedes 'silver.' These belong to various periods, extending from the reign of Assur-nazir-pal, B. C. 885-860, down to that of Assur-bani-pal, B. C. 668-626. The relative amount of gold and silver in these inventories was shown, and the value of each in talents and manehs was discussed. In one case we find mentioned *hurasu . va . kaspu . e-par . mat . su .*, 'gold and silver the dust of his country.'

Gold and silver were put to a great variety of uses. We find thrones, sceptres, images, statues, tablets, bowls, bottles, cups, pitchers, platters, ladles, buckets, handles of daggers, scabbards, and yet other utensils and vessels made of gold; also chains, rings, bracelets, horns, and bars, of gold. Gold was further extensively used in overlaying walls, columns, statues, and awnings, and in ornamental work about the palaces and temples. These facts as to the use to which gold was put are equally true of silver.

The study of this subject affords no hints as to the origin of the use of the precious metals. Gold at least seems to have been very abundant in the remotest times. The earliest Assyrian records show that it was in common use for very many purposes; and the facts that can be gleaned from the Accadian records, which are much older than the Assyrian, carry this common use still farther back into antiquity.



7. Analysis of the *Rei-gi rui-ten*, or Court Etiquette of Japan, by Mr. Gilbert Attwood, of Boston.

Mr. Attwood presented with some prefatory remarks a translation, made by Mr. Tanetaro Megata, of the table of contents of the *Rei-gi rui-ten*, a treatise on the Court Ceremonial and Etiquette of Japan. This is a voluminous work compiled A. D. 1686 by a committee of scholars under the patronage of Mitsukuni, Second Prince of Mito. Of the 510 chapters of which the work is composed, the first 215 treat, in the order of the Calendar, of the ceremonies, religious and other, to be observed on certain days of the year. The remaining chapters prescribe rules for various extraordinary occasions, as well as for the more common occupations of court life.

The *Rei-gi rui-ten* has never been printed. Mr. Attwood has a manuscript copy, in 503 volumes, presented to him by the Tokio Library.

8. A Criticism of J. Darmesteter's *Ormazd et Ahriman*, by Mr. J. Luquiens, of Boston, Mass.

Mr. Luquiens began with paying a high tribute of praise to the unquestionable scholarship and literary ability of M. Darmesteter, and proceeded to discuss the general conclusion of his work: namely, that the twin gods of Iran were in reality born several centuries apart, Ormazd being a descendant of the supreme Asura of an Indo-Iranian period, while Ahriman is an Iranian afterthought, born of the desire to symmetrize the forces of evil with those of the good principle. Even more than to this thesis, exception was taken to the underlying tendency to apply to comparative mythology the doctrine and processes of evolution, and to demonstrate the Mazdean faith as developed out of a previous naturalism. For, if the thesis is well founded, the oldest monuments should stand in a closer relation than the later to an antecedent naturalism; whereas, the contrary is the case: in proportion as the language is earlier, the myths are more scanty, and the unity Ahura appears endowed with moral attributes.

It was further enquired at some length what share in the Iranian traditions is due to the Indo-European solar myth, and what to a native religious element. Following in the footprints of Roth, M. Darmesteter has sometimes been very successful in his comparison and identification of mythical elements—as in his interpretation of the legend of Takhma-Urupa. Here the myth has assumed definite forms, the cloud has turned mountain, the action is made historical, and the personages take their place in heroic dynasties. This gives a sort of law of comparison for the study of Iranian mythology: the echoes of the atmospheric tumult must be sought for in the *chansons de gestes* of Iran. On the other hand, if a legend is found with different and equally characteristic lineaments, pervaded moreover with a strong religious flavor, it will be prudent, in the absence of linguistic clues, to look to native agencies for its genesis. Of all the social and moral entities of the Mazdean system, there is none, however pallid and impersonal, that does not at a given time step out of its frame and put on the aspect of life. The Mazdean world is essentially and from beginning to end a battle-field. To single out any particular moment of this continuous war and interpret it as the reflex of a Vedic myth is unwarranted, so long as the links are still visible which attach it to the primitive conception.

A curious instance of the manner in which M. Darmesteter scoops the moral import out of a tradition in order to substitute the naturalistic myth is his attempt to transform Zoroaster himself into a god of light. He avoids the testimony of the oldest Avestan writings, and stands by later and often puerile legends, which he ingeniously interprets. The founder of Mazdeism, like one more illustrious, has had his apocrypha; but to read his life out of the absurdities of Pehlevi literature is to hold the book upside down. For example, it is related that Zoroaster, being about to ford a river, bethought himself that the respectable women of his train would have to bare themselves before an irreverent concourse; so he prayed; the waters parted, and he led his followers across on dry land. This would seem intended to set forth the prophet's delicacy or power in prayer; but M. Darmesteter draws two things from it: that Zoroaster, like the fire-god

Agni, was brought up among women ; and that. also like Agni, he is son of the waters (*apdm napdt*)!

M. Darmesteter identifies Ahura with the Vedic Varuna, the heaven as deity, founding himself especially on two points: that Ahura is one. and the head, of the seven Amshaspands, as Varuna of the seven Adityas; and that both stand in a close relation to 'order,' primarily a cosmological notion, rising in the course of time to the rank of a moral abstraction, and known in the two religions respectively by the names *asha* and *ṛta*, two forms of the same word. Decided objections, now, are to be taken from the Vedic side to Varuna's headship of the Adityas and their own sevenhood, and to his near relation with *ṛta*, 'order;' but the theses are yet more questionable from the Avestan side. For the Amshaspands, far from deriving from ancient naturalistic entities, rise into existence in Avestan times before our eyes, and are mere religious abstractions. To the Gáthás is known as quasi-personality only *Asha*, 'moral order;' *Ārmaiti*, 'religious obedience,' is nearest to being its fellow; and *Khshatra*, 'royal rule,' and *Haurvatāt* and *Amereketi*, 'fullness' and 'length of life,' are dragged into personal attributes in the mediæval writings. So fundamental is the difference between the two sets of deities that the similarity of number, even if made out, would be utterly empty. To the identity of *asha* and *ṛta* M. Darmesteter devotes his extremely interesting opening chapter. He labors hard to prove that in Avesta as in Veda the original notion is physical, and that the moral import is secondary. But the texts allow only a moral pregnancy to *asha*, and the cited passages merely testify to that characteristic feature of Zoroaster's religion, that earth and heaven participate in the conflict which begins in man's nature. While *ṛta* is the last word of Vedic morality, *asha* is the first and purest word of Zoroaster's law, a sort of Mazdean *logos*, mediator between Ahura and his people, a provident, contriving divinity; it is an abstraction, but with the fullness of life which clothes such entities in Mazdeism; it is a god *in posse*. Here is rather a revolution than an evolution. Even if *Ahura* could be proved the same word with *Varuna*, Mazdeism would not come any nearer to being a mere outgrowth of ante-Vedic naturalism. We cannot but believe that an element foreign to Vedism once made its irruption; religion became conscious; the deity, stripped of its aerial brilliancy, assumed the brighter attributes of a moral responsible principle; a new motive is set in action; the spirit of kindness is the incentive of both god and worshipper. Of all this, however, our author seems to see nothing. It would be interesting to know once for all that the idea of a supreme God was emerging from the confused naturalism of our early ancestors even before they entered the diverging paths of independence; but if we are asked to forsake the safe guidance of linguistic comparison, to overlook the moral import of the texts, and to put the sameness of one typical myth in the place of the diversity of national genius, even the most ingenious hypothesis would be dear at such a price.

After passing a vote of thanks to the American Academy for the use of its room, the Society then adjourned, to meet again in New Haven in October.

Proceedings at New Haven, October 29th, 1879.

The autumn meeting was held at New Haven, on Wednesday, October 29th, the President in the chair. Mr. Van Name acted as Recording Secretary, in the absence of Professor Abbot.

The Directors reported that they had appointed the Annual meeting to be held in Boston, on Wednesday, May 19th, 1880, and had requested the Secretaries, with Dr. N. G. Clark, to act as Committee of Arrangements for it.

On their recommendation, were elected as Corporate Members :

Rev. H. J. Broadwell, of New Haven ;
 Prof. W. I. Knapp, of New Haven ;
 Mr. E. D. Perry, of New York.

Selections from the correspondence of the past six months were read. A letter from the son of our recently deceased member, Rev. Joseph P. Thompson, D.D., announces that the latter had bequeathed to the Society that part of his library which relates to the East, and especially to Egypt, and that the collection, embracing about 500 separate titles, was now already on its way from Berlin to this country.

The following communications were then presented :

1. On the *Lieh-Kwoh Chi*, a Chinese historical novel, by Prof. S. Wells Williams, of New Haven.

Prof. Williams presented a translation of several chapters of this historical novel, which is held in high repute among the Chinese, prefacing it with a brief notice of this class of works in their literature. After referring to the remarkable care exhibited by the Chinese Government in preserving the annals of the nation, and the great extent to which they already reached, he remarked :

In addition to the various kinds of historical writings in Chinese literature, such as dynastic histories, annals, complete records, separate histories or *mémoires pour servir*, local or biographical histories, and official or documentary records and rolls, there are hundreds of authors whose works have exerted much more influence in diffusing a knowledge of their national life and prominent actors among the people. They answer very nearly to our historical novels ; and, like them, some partake most of the novel, and others adhere most to historical facts. The literati regard them with something of the feeling with which we might suppose that Gibbon would have reviewed *Old Mortality* or *Rienzi* ; and class them with the *siao shwuh*, or puerile talks. Yet the insight they give into the national manners and life of various ages, and the influence they exert in the formation of a literary taste and style, recommend them to the foreign scholar as among the most interesting portions of Chinese literature. There is naturally a great diversity in their "style, scholarship, and arrangement," but some writers have been so successful in their attempts to reproduce and vivify ancient times and actors, that their books have a permanent value in exhibiting the age of which they write ; just as in recent years Howson's and Farrar's narratives of the Apostle Paul's life and times have invested him and his period with renewed interest and vitality.

The most celebrated of these panoramic histories in Chinese is the *Records of the Three Kingdoms*, a work in 120 chapters, by Lo Kwan-chung, of the Mongol dynasty in 1310. It narrates the historical events in the century immedi-

ately succeeding the decadence of the Han dynasty, A. D. 168-265. Its vivid description of plots and counterplots, victories and defeats, councils and intrigues, somewhat after the style of Froissart, have impressed this portion of their annals upon the minds of the Chinese during the last four centuries quite as much as Shakspeare's historical plays have tinged the popular estimate of Richard III. or Henry V. among his countrymen. About one third of it has been translated into French by T. Pavie (Paris, 1845). The scenes in it are often represented by statuettes of silk and paper, arranged on a board. At the autumnal festival in Canton, called *Ta Tsiao*, a service like All Souls' Day, the streets are covered with awnings adorned with gay festoons of colored silk, and lighted by glass chandeliers and brilliant lanterns. On such occasions I have seen scores of these historic tableaux, three or four feet long, suspended just above the heads of the people, attracting their attention and questioning as they passed along, crowd after crowd, very much as similar representations of André in the hands of Paulding and his companions, or Pocahontas and Captain Smith, would interest American youth.

Another work of this class is the *Tung Chau Lieh Kwoh Ch'i*, or Records of the Feudal States during the Eastern Chau Dynasty (B. C. 790 to 300), or the period from King Uziah to Alexander and his generals. It covers the time in Chinese history when feudalism showed its destructive tendencies in the strifes between ambitious kinglets and captains, resulting in the abnegation of the imperial power and degradation of the people, and general barbarism of the land—similar to the woes experienced in Europe before Charlemagne's time. The editor and annotator of the work, as it now appears, was Tsai Yuen-tang of Nanking, who published it in 1752. It comes nearer to authentic history than the other, but as a work of genius and skillful disposal of materials is inferior. Both of them weary a foreign reader by the prevalence of dialogue over narrative, but the exigencies of the Chinese language make the former more perspicuous.

The Introduction, in 35 paragraphs, furnishes hints of the principles on which this work was written, and indicates its sources and claims to be regarded as credible history. It is like a review; and the author here analyzes and defends his work, shows its adaptation to instruct and entertain its readers, and gives them directions how to read it so as to derive the most benefit. The first paragraph is sufficient for our present purpose, and is quoted entire.

'The *Lieh Kwoh Ch'i* is unlike other stories, such as the Water Marshes, the Adventures of King Wu, and the Wanderings of Hiuen Chwang, all of which contain many statements made out of whole cloth (literally, split open emptiness and select), but is nearer to the *San Kwoh Ch'i*, though that has many fabrications and repetitions. The present work rather takes events as they happened, and makes its quotations as they stand, thus reducing the record to what really occurred. For if the record does not contain a thing, who has the leisure to make it up? Readers of this work must therefore verify it by the regular historians, and not regard it as a mere story-book. Every one will see that it is specially confined to the records of the kingdoms during the Eastern Chau Dynasty. The removal of the capital eastward [to Loyang] dates from the reign of King Ping [B. C. 770-719]; and general misrule from that of his son King Hwan [719-696]; but this work goes back to the days of King Siuen [827-761]. The change of the capital was caused by the revolt of the snappish Jung tribes, whose attacks arose from the insensate fondness of his son King Yiu for Pao Sz', and the appointment of Duke Kwoh as minister. Pao Sz' was born in King Siuen's reign, indeed, and the children's ditty about the fall of the State was an omen of that reign. It was therefore necessary to go back to that date, and come down to later times in order to make the narrative clear. Though this plan of relating events is like digging up the tree to find its roots, yet there is no other sensible principle to go on.'

Prof. Williams observed that this work had never been translated into any European language, but was well known in Japan, Corea, and Annam. He read the version of the first chapter, which showed the curious mixture of historical facts, doubtful legends, and supernatural agencies in the performance, and lead us to approve the decision of the literati in excluding it from their serious histories. One extract from the chapter will illustrate this mode of treating events. It occurred during the last part of the reign of King Siuen, after he had

been much disturbed by various omens and weakened by defeats. The scene is laid in the palace.

"The king, humming to himself, did not answer, but all at once recollected that three years before he had ordered Governor Tu Peh to make search by means of the constables for the elfin girl, and had hitherto received no report. So after the sacrifices had been divided, he went back into court, where the officers returned thanks for them, and there asked Tu Peh why he had not already reported respecting her. He answered: "I myself personally inquired after the girl without success; but after the strange woman had expiated her crime, and thus fulfilled the ditty of the children, I concluded that if I kept stirring in the affair it would alarm the whole country. I therefore went no further."

"Much irritated, the king then asked, seeing that such was his opinion, why he had not reported it, and exclaimed, "Really, such negligence is nothing short of entire disregard of Our commands, and acting as one pleases. Of what further service can such a disloyal, unfaithful minister be?" He therefore ordered the guard to arrest him and take him outside the palace gate, there to exhibit his head to the populace.

"Terror seized the officers present on hearing this, and they became pale as clay. One of the Secretaries left his seat, and hastily taking hold of Tu Peh, as the guard was dragging him off, cried out to them, "No! No! You must not!" The king saw that it was the former lieutenant-governor, Tso Yu, a near friend of Tu Peh, and one who had been promoted with him. Prostrating himself, he said, "I have heard that although Yao had a nine years' flood, he did not thereby lose his throne; nor did Tang the Successful suffer injury to his power by a seven years' drought. If such disturbances in nature did not bring injury to a reign, how can mere human prodigies be relied on to cause it? If your Majesty executes Tu Peh, I fear that the people will quote these ominous oracles to make sedition; and the outside tribes will rebel as soon as they hear of them. I therefore pray that he may be pardoned."

"The monarch remarked that as he stood up in behalf of his friend, he thereby disobeyed his sovereign's orders, thus esteeming a friend more than a sovereign. Tso Yu replied: "When a prince is in the right and a friend is in the wrong, then the latter must be opposed and the former obeyed; but just the contrary, when the prince is wrong and the friend right. Tu Peh has done nothing worthy of death, and if he be sacrificed, the country will say that the ruler is blinded; and if his ministers cannot convince him of error, they may be justly charged with disloyalty and unfaithfulness. If he dies, therefore, may I fall with him."

"King Siuen's ire was still unappeased, and he cried out: "To destroy Tu Peh is like clearing off old stubble. Why do we waste words on it?" Hearing this, the guard carried him out, and executed him at the palace-gate. Tso Yu, on returning to his house, cut his throat. Hearing of this act next morning, the king regretted that he had put Tu Peh to death, and returned to the palace sick and mortified."

Some months elapsed before his health was restored and he could resume the government. On the recurrence of the winter-hunt, he went out with a great escort to kill game. On the return to the capital, greatly exhilarated, he saw the two friends once more.

"He had not gone much over a mile, when he suddenly felt a mistiness before his eyes as he sat in his chariot. From afar he saw a small car driving up rapidly, in which two persons stood up, each having a scarlet bow on his arm and holding a red dart. Turning towards him, they sneeringly asked: "O my king! Are you pretty well these days?" He then perceived that the two were Tu Peh and Tso Yu, and cried out in a shriek of terror. The apparition vanished while one could rub his eyes; and yet, when the king asked his retinue, not one of them had seen anything of it. While in this state of alarm and doubt, he again saw them both in the little car coming on, just in front of him. He screamed out: "Get out of the way, you guilty devils! How dare you thus insult your sovereign?" and cut at them with his drawn sword.

"They at once railed at him: "O thou perverse and stupid prince! Thou hast no regard for righteous rule, and madly destroyest innocent people; thy days are now numbered, and we have come to be revenged for our lives taken by thee." As they finished speaking, each fitted a red arrow on his scarlet bow, and shot at King Siuen's heart, who, uttering a scream, fell bewildered in his chariot."

2. Travels of a missionary physician in Mesopotamia, Armenia, and Kurdistan, by Dr. D. H. Nutting, of the Central Turkey Mission.

Dr. Nutting gave many interesting details of the journeys he had undertaken in connection with his medical practice in Turkey, and of the observations which he had made on the way.

3. The Dragon and the Serpent in Chaldean Mythology, by Rev. W. Hayes Ward, of New York.

In this paper, after a *résumé* of the facts known as to the worship paid to the serpent among different peoples, Dr. Ward gathered together the references to the serpent in the Assyrian inscriptions. He also attempted to show that, parallel with the well known and more current legend among the Chaldeans, of the temptation of man by a dragon, there was also another form of the same legend, perhaps local in some of the cities of Chaldea, in which the dragon was replaced by a serpent. This is suggested by the well known cylinder (Smith's "Chaldean Account of Genesis," p. 91), in which two figures, a man and a woman, are seen sitting on either side of a tree reaching up their hands toward its fruit, while an erect serpent appears behind the woman. It is almost certain that this represents a legend of the same nature as that of the Temptation given in Genesis. This explanation, adopted by George Smith, Friedrich Delitzsch, Baudissin, and others, though very lately controverted by Menant, is corroborated by another Chaldean cylinder, as yet unpublished, belonging to Professor S. Wells Williams, of New Haven. This cylinder represents the next stage in the story. The representation is very common of the battle which took place after the Temptation between the dragon and Merodach. In this cylinder of Dr. Williams's, we have evidently the same contest taking place, but the dragon is replaced by a serpent. The god Merodach is represented as pursuing at full speed a fleeing serpent, whose horned head, turned back towards its pursuer, he smites with a sword. The vacant spaces are filled up with a smaller kneeling figure (probably to represent the owner of the cylinder), a standing figure with a circle in his hand, a crescent, a *kreis*, five stars, and two branches or small trees. These accessories probably have no special relation to the event pictured of the pursuit and punishment of the serpent by the god. The general character of the seal is very much like that figured in George Smith's "Chaldean Account of Genesis," p. 100, except that the latter represents Merodach as pursuing the dragon. The serpent of the one seal must be identical with the dragon of the other, and is thus connected with the story of the Fall of Man related in Genesis.

4. On certain points in Sanskrit Grammar, by Prof. W. D. Whitney, of New Haven.

Prof. Whitney said that he had during the last year and more been absent from the meetings of the Society, and from his usual part in its affairs, because of his being engaged in Germany, in completing and carrying through the press a Sanskrit grammar, as one of Breitung and Härtel's series of Indo-European grammars. He availed himself of the present opportunity to explain and defend, more fully than could be done in the Preface of the work itself, some of its differences from its predecessors.

The special features of its plan (as stated in the Preface) are these: to include not only the classical language, the Sanskrit properly so called, but also the older dialects, of Veda and of Brāhmaṇa; to treat the material of the language throughout as accented, so far as we have knowledge of its accentuation; to exhibit the facts primarily as they appear in actual use, in the recorded literature, and not according to the presentation of them made by the native grammarians; and to cast all statements, classifications, and so on, into a form consistent with the teachings of modern linguistic science. While it is impossible for us to be too grateful to the Hindu grammarians for their contributions both to Sanskrit learning and to the general methods of grammar, an influence which is beyond their due has been in general hitherto allowed them in determining the form of

Sanskrit grammar, to the detriment of clearness and of proportion. Especial pains have been taken in this work to give the requisite proportion, by noticing everywhere the statistics of occurrence—in sounds, in changes, in forms, in combinations, etc.

Certain features which were introduced, also, into Sanskrit grammar by its earlier European elaborators, and which have enjoyed almost uninterrupted currency since, have been here abandoned. Of these, the one which will be most missed, probably, is the division of verbal forms into "special tenses" and "general tenses," since this has not only been adopted by most writers on Sanskrit grammar, but even introduced to some extent into the treatment of other languages. It is, however, undesirable and indefensible. It grew in part out of the confusion by the Hindu grammarians of tense and mode, and in part out of the great and well-regulated variety in Sanskrit of the formation of the present-stem, and the immense preponderance in use of the forms made from it. The so-called "special tenses" are a single primary tense with its modes and its augment-preterit, the "imperfect;" and a similar array of forms, more or less complete, is made from each of the other tense-stems—the perfect, aorist, and future. There is no more fundamental peculiarity separating the "special" from the "general" forms than separates from one another the different divisions of the latter. The variety of present-formation is, though greater, not much greater than that of aorist-formation, and the two are in part accordant. The other tense-systems, not less than the present, are made from tense-stems, and not from the root directly. In fact, the name "special," as applied to the present-system, really signifies only that this system, owing to the diversity of its formation combined with frequency of use, calls for more "special" attention from the student than the other systems.

While the order of arrangement of the cases in declension established by the native grammar is best retained, because we see the reason and the reasonableness of it, the native order of the conjugation-classes cannot but be abandoned; nor has the nomenclature "*ad*-class, *bhā*-class," etc. enough to recommend it. I have named the classes from their characteristic signs, and arranged them in a natural order, beginning with the class in which the root itself is also present-stem. This unfortunately reverses the order of the two general conjugations which, after Bopp's arrangement, has become widely current; but the result was unavoidable.

The place of treatment of the passive *yá*-forms, and that of the *áya*-forms, including the tenth-class or *cur*-verbs and the causatives, is also other than that which has hitherto been most usual. But the special passive inflection is so purely and solely a present-system that it has no right to be separated from the others of its kind, unless there should be some overruling practical advantage to be gained by so doing: and this is by no means the case. Delbrück, accordingly, in his exhibition of the Vedic verb-forms (*Altindisches Verbum*), has put the passive along with the other systems coming from stems in *a*; and I have followed his example. On the other hand, the stem in *áya* is not a present-stem only, but—like the intensive and desiderative stems, and earlier and more fully than either of these—has been made the basis of a whole conjugation; other tense-stems are made from it, as from simple roots. If the division of secondary conjugation is to be recognized at all, the inflection of the *cur*-class of verbs belongs in it beyond a question, along with that of the causatives, from which they cannot be distinguished, and next to that of the denominatives, from which both are only slightly separated.

As to the various kinds of aorist, their arrangement by different authorities has been so discordant that there was no tradition to be violated. The one which I have adopted—namely, the two forms of simple aorist, the reduplicated aorist, and the four forms of aorist having a sibilant as essential sign—seems to me the one most defensible on joint theoretical and practical grounds.

To the ordinary mode of statement of the euphonic rules of combination, according to which the rules for external and those for internal combination are given separately, and the former first, much exception is to be taken. The rules for internal combination are both more fundamental and of more immediate importance, since the learner needs to know at least something of them in order to understand the make-up of the forms which he has first to learn; the others

can be deferred until he comes to reading or forming sentences. The rules of external combination are historically of quite various character: in part, they are the equivalents of the others, applied under circumstances somewhat different, and in part (as in the change of *s* to *r*) they introduce new processes, unknown or only sporadic elsewhere; in part they are the results of the law as to finals, sometimes (as in *ns* and *nn* for final *n*) preserving traces of endings otherwise lost; in considerable part (and to an extent far beyond what can ever have been the actual usage of a vernacular), they include the extension to sentence-combination of processes governing the combination of the parts of compounds. Whatever their character, however, they can in no way be so well presented as in connection with and in subordination to those rules of internal combination with which they stand most nearly related: and I have accordingly followed this order.

That the native classification of compounds, with its corresponding nomenclature, could not be maintained intact, has been clearly seen by all those who have of late concerned themselves with the subject. The "determinative" compounds, in their two great divisions of "dependent" (*latpurusha*) and "descriptive" (*karmadhāraya*), form the central and fundamental body, here as in other languages; the adjective applications of such compounds, with a value so overwhelmingly "possessive" that they are properly called by that name (*bahuvrīhi*), are, in virtue of their regularity and formation at will, a more peculiarly characteristic feature of the Sanskrit; and they, with two much smaller bodies, not recognized and named by the Hindu grammarians, constitute the great class of derivative adjective compounds, or such as, though having a substantive as final member, are themselves of adjective value. The so-called "numeral" (*divigu*) and "adverbial" (*avyayībhāva*) compounds are merely sub-classes or special uses of the possessives, and have no right to the position they have hitherto held in our classifications; even as sub-classes, they have no conspicuousness or importance in the oldest language. The copulatives (*dvandva*) are a real and highly peculiar class, and important later; but in the earliest literature they are seen in the act of development, hardly a recognizable class at all.

In treating both compounds and derivatives, particular attention has been directed to the accentuation.

Hardly any two grammars have thus far agreed in the number and order of the declensions into which declinable stems shall be divided, while some have made no such division. I have set up five declensions, beginning with that which is immensely the most common, as well as first in alphabetic order of the final: thus, 1. stems in *a*; 2. in *i* and *u*; 3. in *ā*, *ī*, and *ū*, radical and derivative; 4. in *r* (or *ar*); 5. in consonants: the last being divided into several sub-declensions. That the stems in *ā* should be classed with those in *ī* and *ū*, and not, as has hitherto been the case, with those in *a*, seems to me beyond all reasonable question. In the working out of the subject of declension, great use was made of Prof. Lanman's monograph on Vedic declension, published in the last number of our Journal.

In the chapter on the alphabet, no attempt has been made to give a list of all the possible consonant combinations. Such a list is of little or no use, unless accompanied with full details as to the occurrence of the different combinations as initial, or interior, or by the combination of final and initial, as found later only or in the earlier language also (without the resolution of *y* and *v* into *i* and *u*, so common in the Veda), and as to comparative frequency—all which would require a treatise.

The general form given to the work is that which was believed to be called for by the circumstances of the case. There was no Sanskrit grammar in existence, for beginners or for more advanced students, from which could be learned what the actual forms of the language, earlier and later, and their uses, really were: and this was the need sought to be supplied, and in such a way that one might come to the study of Sanskrit from that of Latin and Greek without being repelled and impeded by having everything put gratuitously into strange shapes and called by strange names. The grammatical study of other Indo-European languages is in a very different stadium, and may call for present help in a very different way.

5. On the question whether the *Takharoi* of Strabo were Turks, by Prof. J. W. Jenks, of Newtonville, Mass.; presented by the Corresponding Secretary.

Prof. Jenks follows the notices of the Turks and their name through a variety of authorities, classical and modern, and attempts to sketch the fates of the race, and its influence upon the history of the world, from the breaking-up of the Central Asiatic empire of the Hiong-Nu, in the second century before Christ.

After the presentation of these papers, the Society adjourned, to meet again in Boston, on Wednesday, the nineteenth day of May, 1880.

Proceedings at Boston, May 19th, 1880.

The Society came together at the usual time and place. The President being detained away, the chair was taken at first by Dr. N. G. Clark, and later by Dr. A. P. Peabody, and in the afternoon by Dr. F. Gardiner.

After the reading of the minutes of the last meeting, reports from the officers for the last year were called for.

The Treasurer's summary of the income and expenses of the year was as follows:

| RECEIPTS. | | | | | |
|------------------------------------------------------|---|---|----------|---------|-------------------|
| Balance on hand, May 21st, 1879, | - | - | - | - | \$1,197.70 |
| Annual assessments paid in, | - | - | - | \$85.00 | |
| Sale of the Journal, | - | - | - | 44.76 | |
| Interest on deposit in Savings Bank, | - | - | - | 45.92 | |
| Total receipts of the year, | - | - | - | - | 175.68 |
| | | | | | <u>\$1,373.38</u> |
| EXPENDITURES. | | | | | |
| Printing of Journal (Vols. x., xi.) and Proceedings, | - | - | \$645.18 | | |
| Expenses of Library and Correspondence, | - | - | 54.14 | | |
| Total expenditures of the year, | - | - | - | - | 699.32 |
| Balance on hand, May 19th, 1880, | - | - | - | - | 674.06 |
| | | | | | <u>\$1,373.38</u> |

The amount of the Bradley type-fund is now \$815.58.

The Librarian reported that the most valuable donation of the year—and, after that of Charles William Bradley, the most valuable gift ever made to the collections of the Society—had been the books relating to the East forming part of the library of the late Dr. Joseph Parrish Thompson, and bequeathed to the Society by him at his death in September last at Berlin. By the kind and prompt care of his family, they had been received at New Haven before the end of the last year. The number of titles in the collection is 365; of volumes, bound and unbound, 284; of pamphlets, 122. The works relating to Egypt form, as from the direction of Dr. Thompson's studies would naturally have been expected, the most valuable part of the collection, and include many costly publications. The current exchanges of the Society and other gifts have brought a further increase of 81 volumes, 116 parts of volumes, and 22 pamphlets. The present number of titles of printed books in the Library is 3984; of manuscripts, 144.

The Committee of Publication reported that the concluding Part of Vol. X. of the Journal had at last, after many and regretted delays, been completed and distributed to the Society's members and correspondents, a couple of months ago. Of Vol.

XI, a part was also already printed. With the express sanction of the Directors, the Committee had recently accepted for publication in the Journal Prof. Whitney's Index Verborum to the published text of the Atharva-Veda; and, as this would make the bulk of a whole volume, it had been resolved to issue it as Vol. XII, leaving Vol. XI. to be filled up in the mean time with the usual miscellanies.

The Directors gave notice that they had re-appointed the Committee of Publication of the last few years. Also, that they had designated Prof. S. Wells Williams of New Haven to represent the Society at the approaching Centennial festival of the American Academy of Arts and Sciences, and to be the bearer of its congratulations and good wishes to the Academy. Further, that the autumn meeting of the Society would be held in New York in October next.

On recommendation of the Directors, were then elected to Corporate Membership the following persons:

Mr. Porter C. Bliss, of New York;
 Rev. George S. Burroughs, of Fairfield, Conn.;
 Dr. George Z. Gray, of Cambridge, Mass.;
 Mr. P. L. Armand de Potter, of Albany, N. Y.;
 Mr. George H. Schodde, of Martin's Ferry, Ohio.

The Corresponding Secretary presented the last half-year's correspondence, and read a few extracts from it. In connection with it was exhibited to the meeting a curious votive inscription from India, stamped on a small pad of soft clay and burnt, and then enclosed in an acorn-like structure of soft clay and the whole burned again. The inscription, in an alphabet akin with that ordinarily used for Sanskrit, had not yet been deciphered.

The presiding officer appointed Professors Gardiner, Toy, and Latimer a committee to nominate officers for the ensuing year, and the ticket proposed by them was elected without dissent. Thus:

President, Vice-Presidents, Secretaries, Treasurer and Librarian, the same as last year.

Directors, Mr. COTHEAL, Prof. SHORT, and Dr. WARD, of New York; Prof. GREEN, of Princeton; Prof. LANMAN, of Baltimore; Prof. PEABODY, of Cambridge; Prof. THAYER, of Andover.

The Corresponding Secretary read the names of members deceased since the last annual meeting (or earlier, but not hitherto reported): namely, Corporate Members,

Rev. Charles A. Brigham, of Ann Arbor, Mich.;
 Mr. James Lenox, of New York;
 Dr. Joseph P. Thompson, of Berlin;

Corresponding Members,

Dr. A. D. Mordtmann, of Constantinople;
 M. Nicolas de Khanikoff, of Paris;

Honorary Member,

Prof. C. J. Tornberg, of Lund.

The Secretary, in connection with these names, gave some account of the life, and the services to learning, of each of the persons mentioned:—of the distinguished Semitic scholar Professor Tornberg (deceased in 1872), the regular receipt of the successive volumes of whose great work, the *Ibn el-Athiri Chronicon* (recently completed), had long testified both to his great industry and to his interest in the Society;—of the well-known *savant* M. Khanikoff, who during his official residence at Tabriz had been the efficient friend of American missionaries, who had sent from there his paper on the “Balance of Wisdom,” which held a conspicuous place among the publications of the Society of twenty years ago (*Journal*, vol. VI.), and whose retirement near Paris had been fruitful of contributions especially to the geography of the East;—of the numismatist and epigraphist Dr. Mordtmann;—of Mr. Brigham, whose presence and whose lively communications had often added interest to the Society’s meetings;—of Mr. Lenox, whose munificent foundation of a free library of consultation in New York had forever linked his name with the progress of American learning;—and especially of Dr. Thompson, whose friendship he had enjoyed, and whom he had often met during his recent residence abroad, admiring more than ever his rare qualities of mind and heart, his indefatigable activity, and the smiling energy and spirit of his struggle against a complication of bodily disorders which would have reduced almost anyone else to the condition of a helpless valetudinarian.

Dr. Peabody added his own deeply-felt tribute to the memory of Dr. Thompson, dwelling especially upon his activity as a publicist, the part played by him in the association for promotion of international jurisprudence, and his ready and effective usefulness as counsellor and aid of his countrymen who visited Europe.

Dr. Peabody also spoke of the merits of Mr. Brigham, the unusually wide range of his literary interests, and his usefulness as reporter and critic of others’ investigations. And Professor Toy and Messrs. Luquiens and Bliss added appreciative remarks as to other of the persons mentioned, particularly Tornberg and Mordtmann.

The following resolution, expressive of the Society’s sense of its loss in Dr. Thompson and his generosity toward it, was prepared and presented by Dr. Peabody, at the suggestion of the meeting, and was unanimously adopted:

Resolved, that our Secretary express to the family of the late Rev. Dr. Thompson our gratitude for their courtesy and kindness in regard to his testamentary disposition in our behalf, our high appreciation of his bequest—one of the most valuable donations ever received by us from any quarter—and our profound sense of his eminent worth, and of his distinguished services as a scholar, as a Christian minister, and as an honored representative of his country, and friend and helper of his fellow-citizens, during his long residence in Europe.

Of communications, which were now in order, were presented those whereof abstracts are given below.

1. On Palestinian Archæology, by Rev. Selah Merrill, of Andover, Mass.

After calling attention to the systematic exploration of Palestine and Syria that has been carried on in recent years, Dr. Merrill proceeded to a description of a few of the interesting archaeological remains of those countries; the following is a brief synopsis of his paper, which could not well be given more fully without illustrations.

A large number of drawings were exhibited to the Society, representing the different objects remarked upon; among them were pictures of glass articles from Phœnician tombs at Sidon. Two of the largest and finest of these articles are, so far as is known, unique. Objects of pottery, bronze, and gold, are likewise found in connection with the tombs, or among the debris far below the surface of some ruined city. This is true on the east as well as on the west of the Jordan. Pictures were shown of a bronze bull and of a bronze idol belonging to Phœnician times, and reference was made to the valuable collection of M. Peretie of Beirut, who during his long residence in that city has been unusually successful in obtaining important monuments of a very remote period. Copies of an Assyrian sculpture were also shown which Dr. Merrill had found in the hills east of Tyre: confirming what he had before shown from the cuneiform inscriptions to be probable, that in the time of the Assyrian invasions their armies followed from Banias to the sea-coast two main routes, one leading to Sidon, and the other, farther south, to Tyre.

The dolmens of the country were also remarked upon, and pictures presented of some of the more curious ones. The number and variety of these interesting monuments is very great in eastern Palestine, and many facts have been gathered which may help in clearing up the question as to their origin.

Quite an important relic in Dr. Merrill's possession is a stone ball such as was used in the ancient *baliste*. He found it in an underground passage of the castle at Banias. In Josephus and other ancient writers we read of a castle being taken, and the garrison thereupon retiring to the citadel, where they held out for a long time, or perhaps resisted successfully all further assaults of the enemy. The Banias castle is a good illustration of the relation of these two parts of one and the same fortress. The citadel is at the eastern end, and is about 150 feet higher than the castle proper. It has a strong wall and a deep trench of its own, and would be a formidable place to attack even after the great castle below and about it had been captured. It was under this citadel, among debris and ruins, that the ball in question was found. When thrown it was injured slightly, so that at present it is not perfectly round. Its diameter is seven inches and its weight thirteen pounds. Elsewhere he found two, quite perfect, with a diameter of fourteen inches, and weight of over a hundred pounds.

Josephus, speaking of the size of these stones, says they were of the weight of a talent. This may have been 93 or more pounds; and the weight of the largest found is sufficiently near 100 pounds to furnish an important corroboration of Josephus's words. In the siege of Jotapata in Galilee a large number of these engines, called by Josephus *πετροβολος* and *λιθοβολος*, were employed, and their destructive power was very great: "the stones, driven whizzing from the machine, carried away the battlements, and broke off the corners of the towers. And there was no body of troops so firm as not to be overthrown to the last rank by the violence and magnitude of the stones." Some instances of their effectiveness are given, and among them that of a man "who stood near Josephus upon the ramparts, being struck . . . his head was torn off, and his skull flung to the distance of three furlongs." Again, in the siege of Jerusalem, speaking of the tenth legion, he says: "The stones that were thrown were of the weight of a talent, and had a range of two furlongs and more. The shock, not only to such as first met it, but even to those beyond them, for a considerable distance, was irresistible." The stone being white, and easily seen, the Jews "had watchmen posted on the towers, who gave warning when the engine was discharged and the stone projected, calling out in their native language: 'The son is coming;' on which those towards whom it was directed would separate and lie down before it reached them." The Romans afterwards blackened it, so that it could not be so readily discerned, and consequently "many were swept down by it at a single discharge" (War, iii. 7, 9, 23; and v. 6, 3). The words referred to would probably be *בָּרָא* *אֶת־הַבֶּן*, and the first *בָּ* of *אֶת־הַבֶּן* would no doubt be elided, leaving a word of two syllables which could be spoken quickly.

One of the altars which Dr. Merrill has is adorned with a grape leaf and a cluster of grapes, and has upon it a bullock's head finely carved in relief. In the

top of the head is a well preserved fire-box. Another altar is $9\frac{1}{4}$ inches wide and 15 inches tall. It is square, with basin in the top, and near the upper edge are sunken places where the overlying material was fastened. On one side is a serpent, and on the opposite is another with a flat breast. Both have crowns upon their heads, and the one first referred to has a beard, which Prof. T. O. Paine states to have been among the Egyptians a symbol of divinity. Of the two remaining sides, one has a bullock, above which is a wreath festooned, and the other has carved upon it an eagle with wings spread, and in its beak a large ring-shaped wreath. This eagle has a crown upon its head like that upon the heads of the serpents. The material is alabaster; the carving is beautifully done, and the figures are well preserved. This altar was dug up at Jebail, the ancient Byblos.

Attention was also called to the ancient millstones which are scattered over the country in both Eastern and Western Palestine. They are found in quarries, by the side of ancient roads (where they were left apparently by some accident), along the large water courses, and are very common among the ruins of Moab, Gilead, and Bashan. The size of these stones varies a great deal, some being quite small and others very large. Such stones have doubtless always been in use; hence it is difficult if not impossible to assign those now found to any particular age. Rev. J. A. Paine holds that these mill-stones were "mysterious disks" "connected with the worship of Baal." "Even without excavation in this land it may turn out that the gods of the Moabites were simply orbs of stone" ("Identification of Mount Pisgah," pp. 21, 68). Dr. Merrill has found a stone larger than his largest: namely, 11 ft. 4 in. in diameter and 3 ft. 8 in. in thickness; but it was certainly designed for a millstone. These "mysterious disks" are still quarried at several points in the Lejah, and the price varies, according to the size, from ten to twenty-five dollars. They are transported to the different towns of the country where they are in demand, not for purposes of superstition, but for the more practical ones of crushing olives and making flour.

In connection with the tombs at Sidon were found four small objects of stone, with characters inscribed upon them. The stones are of flint, and of different sizes, while of the characters, eight in all, no two are alike. Their weight is respectively: 1 oz. 8 dr., 1 oz. 9 dr., 1 oz. 11 dr., and 2 oz. 11 dr., avoirdupois. Dr. Birch, who examined them and had casts taken of them for the British Museum, declared them to be very interesting relics, and there are good reasons for considering them as ancient weights.

2. On the True Site of Nineveh, by Mr. Porter C. Bliss, of New York.

Mr. Bliss explained that he had prepared a brief statement of his views on this interesting question at the suggestion of another member of the Society, who was to have presented it to the meeting; but, the gentleman referred to having been at the last moment prevented from being present, he had been led to come himself to read it. His opinion was briefly this: that we are to accept the authority of Ctesias and Diodorus Siculus as superior to that of Herodotus, and to place the ancient Nineveh, the original capital of Assyria, upon the upper Euphrates with the two first, rather than upon the Tigris with the last. The main argument in modern times in favor of Herodotus is that the ruins of Nineveh are supposed to have been discovered upon the upper Tigris. But they have been found there at three different times, in as many places—by Botta at Khorsabad, by Layard at Nimrud, and by the latter's successors at Koyunjik: the last identification being regarded as completed by the quite recent discovery there by Mr. George Smith of the palace and library of Assur-bani-pal, whom he unhesitatingly identifies with "the Sardanapalus of the Greeks;" but these two characters cannot be made to harmonize in any appreciable degree. Rawlinson's present view, that Nineveh comprehended the whole group of cities, with Koyunjik in the centre, may be adopted with limitations—in the sense, namely, that the capitals of several Assyrian monarchs of the period of two or three centuries prior to the final overthrow of the empire were at the localities mentioned, and that any or all of them may have been designated as Nineveh, as that name had become synonymous with the empire and its capital at any given time. But the primitive city,

the Nineveh of Nimrud and Ninus and Semiramis and Sardanapalus, and of all Greek legend and history, was on the Euphrates. The inscriptions on the Tigris are silent as to all these characters. The name was transferred from the old empire, which came to an end with Sardanapalus, to that which arose later in the other region, much as the name of Rome was transferred to Constantinople, and still remains in *Roumania* and *Roumelia*.

The opportunities of Ctesias for gaining trustworthy information were much superior to those of any other ancient Greek, and his treatment of Assyrian history was fuller than any other. Diodorus deliberately adopted him as authority upon all vital points. The site of the Euphratean Nineveh also was not lost to historians for many centuries. It was the Hierapolis of the Syrian empire of the Seleucidae. It was named Nineve Claudiopolis by an officer of the emperor Claudius. Philostratus, the biographer of Apollonius of Tyana, writing near by at Antioch, and founding his account on the memoirs of Darius, a native of Nineveh, states that Apollonius, starting from Antioch, tarried at Nineveh, and there crossed the Euphrates. The Egyptian records also seem irreconcilable with the Tigris location of the city, as is virtually admitted by Rawlinson. The traditions of Nimrod and Semiramis and Sardanapalus linger on the upper Euphrates, as they do not elsewhere.

Mr. Bliss believed the biblical Shinar also to lie upon the upper Euphrates and Chaboras, and the Casdim or Ur-Casdim of Genesis to have no necessary connection with the Chaldea of the times of the captivity; he held that the whole theatre of the earliest biblical geography, from the Noachian flood downward to the time of Abraham, is placed in the region of the upper Euphrates, from Lebanon and the Mediterranean to the Taurus range of mountains.

3. Index Verborum to the published text of the Atharva-Veda, by Prof. W. D. Whitney, of New Haven.

Prof. Whitney said it had already been notified to the meeting that this Index would before long appear, as the twelfth volume of the Society's Journal. Its collection had been begun by him in 1850, and finished in 1875, having been in considerable part so carried on that its material should be furnished in timely instalments to the editors of the Petersburg Lexicon. He spoke of the value of such complete special indexes of important texts to the students of a language, and of their especial importance in the case of a language like the Sanskrit, whose whole classical literature had an artificial aspect, being produced under government of the inviolable rules of a native system of grammar, while the older texts, of Veda and Brâhmaṇa, showed much more nearly the character of a vernacular literature. Of these texts, one, and by far the most important of all, the Rig-Veda, had already its Index, furnished by Grassmann, with a care and skill, and an unstinted expenditure of labor in order to promote in every way the convenience of those using it, which are worthy of the very highest commendation: its plan has been pronounced by Delbrück decidedly superior to that of any existing classical Index, even of those to Homer. Next to the Rig-Veda in importance is the Atharva-Veda, as standing second only to it in amount of true Vedic or *mantra* material. The material of this character, additional to that of Rik and Atharvan, which is scattered through the other Vedic texts and through the Brâhmaṇas and Sûtras, will have in its turn to be collected and sifted and indexed.

As a not inconsiderable part (about one seventh) of the Atharvan material is found also in the Rig-Veda, with greater or less differences of version, the Index will take due account of this by marking with a special sign, every reference which is virtually the repetition of a Rik reference, and with another sign every one at which the Rik offers a various reading. The reading of the *pada*-text for every word and form will also be given, to render unnecessary any publication of that form of text. Moreover, in accordance with Grassmann, will be shown the metrical form of each word, as exhibiting resolution of long vowels, conversion of a semivowel into a vowel, and the like. In the few cases of a difference of reading among the manuscripts, and in the more numerous ones of a deviation of the edited text from the manuscript reading, the facts will be briefly but sufficiently noticed. Under each root will be mentioned all its primary derivatives, and under each stem all its secondary derivatives and compounds. A reversed Index of roots and stems, arranged in order of the final, will be given at the end.

4. Remarks on the Method and Processes of Comparative Mythology, by Mr. J. Luquiens, of Boston.

Dr. Luquiens presented a few remarks on certain studies in Comparative Mythology recently published in different English monthlies, and criticised the laxity of method evinced by most or all of them. The bulk of his remarks, however, bore upon the undue value set on linguistic evidence in researches of this nature. Phonetical affinity was the unerring criterion of comparative mythology in the modest beginnings of that science. but since the latter from a mere annex to comparative philology has become an independent field bordering on the domains of theology and morals, its method ought to be enlarged as its scope has been. Now parity of form indicates at best common origin, but origin in its most external sense, a mere formal pedigree, and remains short of the inner meaning. Words are, after all, mere hulls, and it is by no means unfrequent for a noun to be emptied of its original meaning and filled anew. Adonai, as Mr. Gladstone justly remarks (XIXth Century, October, 1879), means Jehovah in our Scriptures, and yet is the Adonis of Syria, loved by Aphrodite. Moreover, the force of phonetic evidence is chiefly retroactive; the fact that Homeric *Zeus* once meant 'the sky' may prove that further back in history the sky was worshipped; but from the fact that Indo-European *Dyu* was a naturalistic God it does not follow that the later Zeus was ever adored in any such materialistic sense by the Greeks.

The necessity of repeating these and other remarks is well illustrated by the essay written by Mr. J. Darmesteter for the Contemporary Review (October, 1879). This essay, a corollary to the more ambitious work of the same writer on "Ormazd and Ahriman," sets forth the plausible view that there was in the Indo-European period of unity one supreme God, namely "the Heavens;" but, not satisfied with a mere plausibility, the author assumes first that the Roman, Greek, Vedic, and Old Persian religions were alike, and actual naturalistic systems. This premise, controvertible in regard to the Latin and Greek mythologies, and utterly unfounded, it is believed, so far as Mazdeism is concerned, finds in truth no other support than a reckless interpretation of names and texts, as if they had still the meaning bespoken for them by etymology in a far distant and scarcely-known period of unity. This tendency to ascribe to words a mysterious inner cohesion, and to reduce the mental development of our race to mere linguistic phenomena, is again instanced in another chapter of the same essay. The writer announces gravely that he is about to explain how the naturalistic God of the Aryans became from a blind force of nature a moral God; this solution, however, is a wordy paraphrase of M. Müller's famous paradox, that mythology is a disease of language. Morality, in the Indo-European stage, rests upon a linguistic misunderstanding: in the Rig-Veda, to say "everything is in Varuna," that is, in the Heavens, and to say "everything is through Varuna," that is, through the Heaven God, are one and the same thing; "so theism is ever found side by side with unconscious pantheism, of which it is only an expression," and so on; and consequently "Aryan morality came down from heaven in a ray of light!" This conclusion may seem more brilliant than intelligible; but even the theory, much clearer, of our race's blundering into a moral conception is not without difficulties; for since all the Indo-European families acknowledged, in historical times, a personal God, we have to admit for all of them an identical and very surprising looseness of speech. Mr. Darmesteter appears to have a vague consciousness of this improbability; for he explains, on the same page, that "if ever since the Indo-European period of Aryan unity the theistic conception was more clearly defined than the others, it is because it has deeper roots in the human heart and human nature, which in every phenomenon sees a Living cause, a Personality." But this admission must lead to another: namely, that man, who took out of his deep-rooted fund of ideas the notion of personality, may well have borrowed from the same stock the rest of the outfit of his God; and, indeed, every step of the God-making process described by Mr. Darmesteter shows that man simply clothed his deity in attributes drawn from his inner consciousness and social experiences, and that the mysterious forces which our writer lodges on high were nothing but the moral instincts inherent in man's nature, and far older than the naturalistic Gods.

On coming together in the afternoon, Prof. Gardiner in the chair, the Society continued to listen to communications.

5. On Catalectic Vedic verses of seven Syllables, by Prof. C. R. Lanman, of Baltimore, Md.

The great majority of Vedic verses may be classed as tetrapodies or hexapodies with general iambic movement. The iambic hexapody is the so-called *jagati-pāda* of twelve syllables, and with a pretty strictly diambic cadence: e. g. *sá jâ'yamānah paramé viomani* (i.143.2: et al.). The *trishtubh-pāda* is evidently a catalectic form of the same verse: e. g. *sá jâ'yamānah paramé vioman*. Here the catalexis gives to the cadence a trochaic effect; but the essential similarity of the two hexapodies will probably be questioned by no one. The question is, now, whether catalectic tetrapodies, or verses of seven syllables, are admissible for the Veda, as well as catalectic hexapodies, or verses of eleven syllables.

The Hindu metrical authorities, as the Rig-Veda Prātiśākhya, though they admit in certain cases of 7-syllabled *pādas*, do not help us much. For they show, along with their acuteness in some cases, a great lack of it in others. Thus, of the verse *présthām u priyāṇām stuhi āśva ātithim agnīm ráthānām yāmam* (viii.92.10), the *pādas* are reckoned (RPr. xvi.15) as of 6, 8, and 7 syllables respectively; while the cadence requires that the third *pāda* be made of 8 by the resolution of *-nām* to *-naam*, and that *présthām* in the first be read *práyishtham*, as almost invariably elsewhere in the Rig-Veda (and correspondingly in the Gāthās). Is then the resolution of *-ām* to *-aam*, necessary in the third *pāda*, required also at the end of the first, extending the seven syllables to eight? The instance is a typical one, and it is seen that the Hindus leave us entirely in the lurch.

There are numerous cases in which *pādas* written as of 7 or 11 syllables have their ultimate capable of a resolution whose admissibility is proved by its necessity in other cases. They cannot be used for either side of the question in hand. The gen. pl. in *āndm*, *īndm*, *ūndm*, *ṛndm* are the most frequent examples of such admissible resolution: in 359 cases where this is proposed by Grassmann, 248 are at the end of catalectic *pādas* of 7 syllables; 16 at the end of such of 11 syllables; and only 95 elsewhere. So of the 75 cases where resolution of the ending *bhyas* to *bhiyas* is proposed, only 32 are imperative; 20 render acatalectic the *pādas* of 11 syllables, and 23 those of 7. Again, of the 46 instances where Grassmann restores a syncopated *a* to stems in *man*, *van*, *an*, the validity of the process is established by 12: e. g. *sómah kalāṣe çatīyām[a]nā pathā'* (ix.86.16: AV. and SV. actually read *-yāmānā*); of the rest, 27 are at the end of 7-syllabled, and 7 at the end of 11-syllabled *pādas*: e. g. *sūkhūtyah somapā'vne* (vii.31.1).

Since all these cases, in which the penultimate is long and the ultimate is susceptible of resolution, are indecisive, the question must be discussed on the basis of *pādas* of other character. Thus:

1. With long or heavy (positionally long) penultimate, but the resolution of ultimate of doubtful admissibility: examples are *ā' āntā ā' parākā't* (i.30.21), *trā'yantim ihā devā's* (x.137.5), *āgne kēbhiḥ cūl évāis* (viii.92.13), *saskī'm ābudhyamāne* (i.29.3), *niryuvānō āçastis* (iv.48.2), *prāti yād im havishmān* (i.127.10)—such are numerous.

2. With heavy penultimate which would however be made light (prosodially short) by the resolution: examples are *svayīm sā' rishayādhyāt* (i.129.8), *sācemaḥi sacathydīs* (v.50.2), *çatām gā' āthurvabhyas* (vi.47.24).

3. With an ultimate incapable of resolution: examples are *yajñasya dhārshū śādman* (x.105.9), *samāne ādhi bhārman* (viii.2.8).

4. With penultimate of doubtful resolution or yielding a faulty cadence if resolved: examples are *yó asmābhyam árávā* (ix.21.5), *vīro devāsya netūr* (v.50.1), *tigmā' didyūn maghónos* (v.86.3).

The combination in the same verse of *trishtubh* (11-syllabled) with *jagati* (12-syllabled) *pādas*, though sometimes clearly avoided (as by the substitution of *viomani* for the more usual *rioman* in the *pāda* first quoted above), is nevertheless not very unusual. And it does not appear why the relation of a *jagati* to a *trishtubh* is not entirely analogous with that of a *gāyatri* (8-syllabled) *pāda* to its catalectic form. If these things be allowed, and if further, as has been shown above,

there is a necessity for admitting the existence of 7-syllabled *padas* in some cases, there seems to be no reason why this admission should not be considerably extended, to those classes of *padas* in which resolution of a final after a long penultimate is merely possible but not imperative.

6. On Noun-Inflection in the Sabean, by Prof. C. H. Toy, of New York.

Nearly fifty years have elapsed since the first attempt to construct the language of southwest Arabia, sometimes called Himyaric, or Himyaritic, but better Sabean. In that time much has been done to fix its form, but, notwithstanding the recent great increase of material (the number of inscriptions now known being over 800), many points of grammar are still obscure. This is not from any lack of zeal or acumen in the investigation, but partly because of the sameness of matter in the inscriptions (most of which are votive or mortuary), the same words and phrases continually recurring, and partly because of the absence of indication of vowels in the writing. It happens that some curious and interesting questions arise in connection with the inflection of the noun, as to which the Semitic dialects are so generally substantially at one. On certain points recent writers are agreed: namely, that the noun has the postfixes *m*, *hu*, *han*, and *n* (the vowels here used are conjectural), that the dual ends in *ni*, the fem. plural in *t*, and the construct masc. plural in *yod*, and sometimes in *waw*. But on further points of detail there is much difference of opinion, and not a great deal has been done towards bringing the phenomena into connection with those of the sister dialects.

The postfix *m* is held with tolerable certainty to be the mimation, as in Assyrian (and in survivals of ancient forms in Hebrew), answering to the nunation in Arabic. We do not know with what vowel or vowels it was pronounced—that is, whether Sabean retained the old Semitic distinction of cases, or had dropped one or two of them, and, if so, which it had retained. Osiander refers, indeed, to the expression אולרים רבין, 'male children,' in Brit. Mus. Insc., 18. 6; as the noun is here in the accusative, this termination, if we are to read it *um*, would go to show that Sabean had retained only the old nominative-ending; but this is contrary to what has occurred in other dialects, and is contradicted by the *yod* that elsewhere appears in Sabean; and, in any case, one such instance is insufficient to establish a rule. Whether the *yod* and *waw* were ever used in Sabean as mere vowel-letters, as in Arabic and Hebrew, is uncertain. An equally difficult question is, whether this *m* was employed as postfix in the plural, as the *m* in Hebrew and the *n* in Arabic. It might seem an easy matter to determine this; but in fact, with our present material, it is not easy. Take, for example, the arguments of Col. Prideaux, who regards the *m* as the termination of the external plural (Trans. Soc. Bib. Arch., v. 419). 1. He thinks, after the analogy of the Arabic and Hebrew, that the plural ought to have the same ending as the singular. But Assyrian has *m* in singular, and *n* in plural; and the dual, which in Hebrew and Arabic agrees in this respect with the singular and plural, has *n* in Sabean. It does not help to say, as Prideaux does, that this dual is a remnant of the second cardinal *tani*; for this numeral has *n* for its second radical in all the dialects; and, assuming the origin of the dual to be the same in all, we could not thus account for the occurrence of *n* in some, and *m* in others. 2. The expression מלך חמיר he renders, with Gesenius, 'King of the Himyarites,' and not (regarding the final *m* as mimation) 'King of Himyar,' on the ground that there was no region called Himyar, but only a people called Himyarites. But as to this we cannot be said to have trustworthy information. 3. He appeals to certain Arabic rules of nunation, as that "nouns ending in *n* are diptote," that is, unnnated, and "proper names formed by a combination of two words are diptote," and regards the final *m* in such cases as plural sign. It is, however, precarious to transfer the rules of one language to another in this way, and we know that the Sabean mimation does not act always as the Arabic nunation. The rules, moreover, are stated too absolutely: Arabic allows nunation in some common and some proper names in *n*, and in some compound proper names. And these latter actually occur with mimation in Sabean, as עבד שמש, 'servant of Shamas' (Brit. Mus. Insc., 13. 1); we cannot, therefore, assume the plural ending in חדרמתם, 'Hadra-

maut.' It has been long since declared that Sabea proper names resemble the Hebrew and Phenician much more than they do the Arabic. 4. He cites some general Semitic grammatical rules. Thus, in Halévy Inscr., 87. 1: *בְּקָרִים בִּן*, 'officers of Bin,' he thinks the *m* plural sign, because the mimation would fall away in the sing. construct; but it would, by the ordinary rule, equally fall away in the plural. The example from Hal., 215. 3: *חֲמִשָּׁה קָבִים*, 'five kabs,' is more pertinent. Certainly we should here expect the plural, and be inclined so to take it, though the gender makes a difficulty, but for the general difficulty to be presently mentioned. 5. The occurrence of such words as *אֶנְשִׁי*, 'enemy,' Os., 18. 10, and *אֲנִי*, 'man,' Prid., 18, as collectives is too common to make it necessary to regard an *m* attached as plural sign. These examples are not conclusive, and against the supposition that the *m* is plural sign is the constant absence of the *yod* or *waw* before it. True, Phenician constantly writes the plural defectively, but it does so in the construct as well as in the absolute, while Sabea construct regularly shows the *yod*. The Assyrian presents a different case: it has a masc. plural in *t* (*yod*), and another in *an*, but this latter is rare, and it would hardly be safe to adduce it in support of a Sabea *am*. But neither is there proof that *n* was the plural sign; the *n* has a different meaning, as will be shown below. The only sign of the plural as yet discoverable is *yod*, and, in one word, *בָּנִים*, 'sons,' *waw*; this *waw* is a petrified survival of the old nominative, which has probably in the general usage yielded to the genitive.

The termination *n*, which occurs with verbs as well as with nouns, is an expression of emphasis. There is nothing in the context where it is found to fix it as a plural sign—it is, indeed, sometimes added to an internal plural; and as, in all Semitic dialects, it shows in the verb a strengthened sense, it is more natural to suppose such a sense in its use in the Sabea noun. It is often followed by *han*, which also occurs separately with the noun, in the definite demonstrative sense 'this.' The ending *n* is found in the construct state. The postfix *hu*, or in the Hadramaut dialect *h* and *su*, seems not to differ greatly in sense from those just mentioned. It might naturally be taken for the possessive suffix of the 3d sing. masc., but its use precludes this explanation; we can hardly translate *הַנָּשִׁי הַנִּשְׁכָּה*, 'his city of Nashk'—the only such construction we know is the Aramaic anticipatory suffix, and we should here render 'the city of Nashk'—which, however, is not the meaning intended in the inscription. The *h* or *s* has a demonstrative sense, like the Hebrew *ha*, but it is not clear that it has the power of the definite article.

These facts may point to an original coexistence of the demonstrative postfixes *m* and *n* in Semitic, which were attached to the primitive noun-verb. On the separation of the noun and verb, the *n*, we may suppose, was assigned to the verb in the primitive language, and has been retained in all the dialects except Ethiopic. Both *m* and *n* are employed with the noun, but the different dialects chose between them according to principles unknown to us; why Assyrian, for example, should have *m* in the singular, and *n* in the plural, has not yet been explained. This postfix, from having been at first merely a sign of general emphasis (Osiander), came after a while to be a definite indication of determination (in those dialects that did not develop an article), or of indetermination (in those that did). This rule, however, is not to be pressed too far; Sabea has no well-defined article, and yet its mimation is indeterminate. What is peculiar in Sabea is the use it makes of the postfix *n* in nouns, as above described; in no other Semitic dialect does this act as a demonstrative postfix. We may perhaps bring it into connection with the *h*, *hu*, *han*. The base of these is probably *ha*, and the last is a compound of *ha* and *an*. This *hu* is the original form of the accusative ending, and survives in Ethiopic as *ha*, while *a* is the ending in the construct. In Aramaic it has petrified into *d* (*o*) as a sign of determination, nearly equivalent to an article. It is to be observed that Sabea *n*, Ethiopic *a*, and Aramaic *d* all occur in the construct state; it is frequently said that in Aramaic this is the result of decadence of force, but it seems more likely that it is an instance of the original flexibility of the form, which, as simply demonstrative, might stand before a determining noun, or not. How the postfix transliterated *hu* stands related to *ha*, it is hard to say; there are indications

(particularly in Hebrew and Aramaic) that *hu*, *hi*, and *ha* originally stood side by side with the same force, and were gradually differentiated. In the other dialects they were employed as possessive suffixes, in Sabean the *hu* became an emphatic postfix, acting somewhat as an article. The Hadramaut form *su* is to be explained in the same way (as in Assyrian). Thus the Sabean advanced by its postfixes *n*, *hu*, *han* towards the article, as the Aramaic did by its *d* (out of *ha*). It seems even to have a greater variety of arthrous expression than Hebrew and Arabic, but not so great distinctness; however, the precise difference of use between *n* and *hu* is not clearly made out. In all these nominal inflections we must probably see, not the corruptions of an unliterary dialect, but the maintenance of the original flexibility of forms, which never were differentiated into the precision of the more cultivated languages.

7. On a certain Phonetic Change in Zend, by Mr. Luquiens.

In his recent studies on Iranian phonetics Hübschmann lays down the rule respecting *ô* as follows: "*ô* arose mainly from original *â* or *a*, under the influence of a preceding labial or of following *u*." The indefiniteness of this rule leaves room for exceptional formations; still I miss, both in the rule and in the author's comments, the mention of an important factor: there may be in *ô* a compensative element, as when it stands for original *as*: or, especially, when it results from the vocalization of *v* or *b* between *a* and *y*, as in *rasmôyô*, *hōyâm*, *kōyâm*, etc. It is to that factor, I think, that some of the anomalies may be ascribed; the cases of compensation, however, need not and cannot arise from the same causes; there is clearly a distinction to be made between forms like *māvôya*, *khshamāvôya*, *hvāvôya*, and those like *akôya* etc.

1. *māvôya*, *khshamāvôya* are supposed by many, and by Hübschmann himself, to stand for the dative case of the personal pronouns *azem* and *yuzhem*, namely for *maibya* and *khshmaibya*; but this opinion accounts neither for the presence of the *ô*, nor for that of the *d* in the first syllable. Now there are in the Gâthâs possessive forms like *khshamāvañt*, *twāvañt*, *māvañt* (this latter, to be sure, ought to read *māvañt*), used personally, as in *daēdām yâ khshamāvañtô*, 'the law which is of you;' with one exception, those forms belong to the Gâthâs. On the other hand, the dative forms *maibya* and *khshmaibya*, with one exception (Vd. 20. 22), are unknown to the mediæval Zend—which leads to the plausible surmise that the possessive forms *khshamāvañt* and *māvañt* have taken their place in the dative, and also their ending, namely *bya*; hence the forms *khshamāvôya* standing for *khshmaivabya* (it is common for suffix *ant* to wear out into *an*), and *māvôya* for *māivabya*; the vocalization of the *b* is well supported even among pronouns: as *yūshmaoyô* for *yūshmaibyo*, dat. of *yūzhem*; and *hvāvôya* stands in a like relation to the possessive *hvāvañt*, from *hva*.

2. In forms like *akôya*, *isôya*, etc., *ô* suggests to me the vocalization of an organic *s* (*h* in Zend) before *y*—that is, *akôya* is perhaps simply the genitive case of *aka*, and stands for *akahya*=*akasya*; *isôya* for *isahya*; and so with *hvadrôya*, *hadrôya*. *jôya* (Y. 32.7) is more difficult; a genitive case it is not; I see in it a participial form *jahya*, from root *jah*=*gas*, 'come, end.' Of the possibility of the process there is little doubt; not only will such Vedic forms as *an̄hoyu*, *askrdhoyu*, *duvoyu*, but also the more cogent fact of the Homeric genitive, speak in its behalf. The regular change of *an̄h*=*us* to *ô* or *ōn̄h* before suffixes beginning with a sonant may offer a support to my surmise, which is strengthened moreover by a reading of the Vendidad-Sade, Brockhaus's edition, in Y. 43.8, namely *khshathrôyâ* for *khshathrathrâ* (it occurs in the same stanza as *isôya*, yet the plea of "attraction" is not admissible, from an unknown and anomalous to a clear and usual form; the contrary might rather be expected). Finally, the sense of the passages concerned may be taken as conclusive evidence: Y. 51.8: *ityat akôya drugvâtê ustê yê ashem dadrê*: 'That he may be of harm to the wicked, and weal to him who has maintained the holy order.' The same idea in a more forcible form is found in Y. 43.8: *dvæshao hyat icôyâ drugvâtê at ashâunê hyem rafnô aojôñhvat*: 'That I may be a plague of might to the wicked, a powerful help to the righteous.' Here, indeed, the parallelism between *icôyâ* and *aojôñhvat* amounts to positive evidence. In Y. 43.2, *atad ahmâi vîçpandm vahistem gâthrôyâ nâ gâthrem daiditâ*: 'To him would belong everyway the best of the fire who should receive (give?)

the fire with thy understanding,' etc. This is a coarse and approximate rendering; but the thought, harsh as it is, finds a parallel in the next verse: 'he would come to something better than the good, who should teach us,' etc.

The passage in Y. 32.7, which contains *hadrôyâ* and *jôyâ*, is even more difficult than the last, both syntactically and etymologically; yet the admission of a genitive value for *hadrôyâ* would certainly simplify the problem. I venture a rendering, premature perhaps, in which I give *âjôî hadrôyâ* a sense similar to the Vedic phrase *âjishu sâtûye*: 'In the fray for the gain, he does not know the outcome of the violences he teaches,' etc.

8. Mr. John Westall, of Fall River, Mass., called the attention of the Society to certain representations of the resurrection on Egyptian monuments, and remarked briefly upon them.

9. On the Rules of External Combination in Sanskrit, by Prof. Whitney.

The substance of Prof. Whitney's paper was as follows:

A peculiar and striking phonetic feature of the classical Sanskrit is, as is well known, the strictness of the rules governing the combination of words in the sentence. These are in general the same which regulate the combination of members of a compound word: mainly the avoidance of hiatus, and the assimilation of surd and sonant finals and initials. By some they are regarded as a great advantage and merit of the language; by others, as certainly not in their full extent a possible characteristic of vernacular speech, but as more or less artificial, or even a figment of the native grammarians.

So far as the combination of final vowels (not diphthongs) with initial vowels and diphthongs is concerned, much light is cast upon the rules from the Vedic texts. These, though written according to the later rules, are required by the metre to be read very differently, with extremely frequent resolution of the combined elements, and restoration of hiatus. Here, however, there is a noteworthy difference between the class of cases in which an *i*- or *u*-vowel is by rule to be changed into *y* or *v* before a dissimilar vowel, and the class in which two vowel elements are to be fused into a long vowel or diphthong. In the former class, the *i*- or *u*-vowel prevaillingly maintains its vowel-value unaltered. This is so to a considerable extent even in the processes of internal change, especially in declension; in composition, the cases of retention are to those of conversion to semivowel, in the Rig-Veda, about as 11 to 1 (see Dr. Edgren, in these Proceedings for Oct., 1878), and in sentence-combination (ibid.) the proportion against *y* and *v* is still greater; in the Atharva-Veda the condition of things is nearly the same. In the other class of cases (chiefly the combination of *a* or *i* with *u* following vowel or diphthong), the proportion is decidedly the other way, although in every department are found examples of disregard of the later rules. In internal combination, the exceptions are only sporadic: in composition, such cases as *ghrtââna*, *devââdha*, *âchaûkti*, as compared with *âjâvi*, *devêshita*, *trôti*, *âpti*, etc., are a very small minority in RV., and in AV. almost unknown; and in the sentence, the fusion is prevalent in RV., and still more so in AV. In both classes of cases, the mode of unification is practically the same in internal and in external combination; and the fact in regard to the latter may with evident plausibility be stated thus: the contractions of two vocalic elements, final and initial, into one syllable, which were admissible in the oldest language, and more or less frequent according to the nature and circumstances of the combination, have later been artificially made obligatory in all situations.

In the treatment of final diphthongs before an initial vowel, the rules of external combination are different from those of internal: the former require or permit (except in the case of *e* or *o* before *a*) the loss of the final element of the diphthong, *a* or *i* remaining, with hiatus before the initial vowel. The persistence of this hiatus testifies to the comparatively recent loss of the intervening *y* or *v*; and, on the other hand, the occasional fusion, even in the Veda, of the two vowels across the hiatus indicates that this loss is a genuine one, and began before the date of the classical language. Without going into details, it may be said that the general authenticity of the phenomena expressed by the rule is not open to serious question.

As regards the loss of initial *a* after final *e* or *o*, invariably required in the later language, it has been often pointed out that the Vedic usage is very different. In RV., the *a* remains except in about 1½ per cent. of the instances (see Prof. Avery, in these Proceedings for May, 1879); in AV., the proportion of loss has risen to about 18 per cent.; it is, then, so plainly a growing tendency, that we do not need to wonder at its being later, in the general inclination to uniformity, raised to the rank of a necessary rule. The phonetic explanation is difficult; but it seems not unlikely, considering the way in which the accent of the lost *a* is represented in that of the remaining diphthong, that the latter is a prakritic contraction of *-ay a-* and *-av a-* respectively.

In consonant combination, the most noteworthy general difference between internal and external is that in the latter a final surd mute must be made sonant before vowels and semivowels and nasals, while in the former surds are admitted as freely as sonants before these classes of sounds. On this point we can gain no light from the Veda; it is, at any rate, written according to the rules of the classical language, and there is no test which we can apply to determine the faithfulness of the representation. It is not impossible that we have to recognize here a degree of artificiality: a peculiar assimilation establishing itself first in compounds, and thence extended to sentence-collocations. Sporadic instances of such assimilation also before suffixes occur very early, but do not become more common later.

The general assimilation of *m*, one of the most common of finals, to a following initial consonant is natural enough to pass without challenge, although we may be uncertain as to the time when it became obligatory.

As to final *n*, the most remarkable point is its treatment in certain situations as *ns*: that is to say, the retention in external combination of an original word-ending *ns*, of which the sibilant has elsewhere disappeared, and then the extension by analogy of the same process, misapprehended as a phonetic one, to cases where the *s* is not historically justified. This is, beyond anything else in the rules of external combination, a voucher of their genuineness. Indications to a like effect, but of less importance and more questionable character, are seen in other "euphonic insertions" after nasals.

The treatment of *s*, the most frequent of all final consonants, is a subject of prime consequence, and of no small intricacy and difficulty. Before a pause, final *s* becomes a breathing, the *visarga*, or *h*; and the Hindu grammar makes this substitute the starting-point for its other changes: but with evident injustice, since the latter go back rather to the original *s*. Before surds appear in general natural assimilations of the sibilant, in part with allowed substitutions of *h*. Even before palatal and labial surd mutes, unaltered *s* is in the Veda the rule in composition (only one exception in RV., and three in AV.), and quite common in sentence-collocation. The reduction to a breathing tends to extend itself from isolated use to various other favoring situations; the steps of the process and their chronology are not determinable in detail. In internal combination, the change appears only before *su* of the loc. pl., and there merely optionally.

After other vowels than *a* and *i*, *s* before sonants becomes *r* in external combination. In internal, this change is made only before *bh* of case-endings; not even before *dh* of a personal ending—although such an occurrence, if it be found at all, is of extremest rarity. The genuineness and relative antiquity of the conversion to *r* are vouched for by the Vedic examples of *īhr* and *ūhr*, which no grammatical theory could have devised. The extension of a kind of sonant assimilation found only before a mute within the word to collision with vowels etc. outside the word stands obviously on the same plane with the similar treatment of a final surd mute.

After *i*, the complete loss of *s* before a sonant is universal. Within the word, the same loss appears to take place before *dh* of a personal ending: but the examples of its actual occurrence are very few, hardly half-a-dozen. The quantity of the vowel thwarts the attempt to trace a difference of usage in Vedic verse.

The ending *as* becomes in general *o* in external combination before a sonant consonant. The phonetic explanation of this change is one of the most difficult problems in Sanskrit euphony; the suggestion that *ar* has been an intermediate step between *as* and *o* does not seem to remove any of the difficulty, nor to be defensible by good evidence. It is perhaps worthy of note that the conversion to the lingual semivowel *r* is made in cases where the sibilant, if retained as sibilant,

would become the lingual *sh* (e. g. *cakshur*, *haviṛ* beside *cakshuṣh*, *haviṣh*; but *mano* beside *manas*). The same conversion is frequent in inflection before *bh* of a case-ending, but is never seen before *dh* of a personal ending (the only quotable examples, however, of the combination are *edhi* for *as-dhi* and *vadhvam* [*vad-dhvam* ?] for *vas-dhvam*). In derivation, *as* retained unchanged before semivowels and nasals is common (e. g. *dasyu*, *dasra*, *dasvan*, *namasvant*, *dasma*, *vasna*); there are a very few sporadic exceptions (*añhoyu*, *duroyu*, *askṛdhoyu* in RV.; *sahovan* in AV.; *tejomaya* and its like later).

The later rule is that *as* becomes *o* before initial *a*, with loss of the *a*. Where, in accordance with what was noted above, the *a* remains in earlier usage, the preceding final is always written *o*, both in composition and in sentence-collocation; but the requirements of Vedic metre would often be better served by understanding the combination as *as a* or *av a*: and, as between these two, the latter, involving the same conversion as before a sonant consonant, appears at present decidedly the more probably assumable. So too before other vowels, where the *s* or its substitute is recently lost, and the hiatus remains, the analogy of the treatment of *as* before sonants in general, and that of the loss of final element of a diphthong, make it altogether likely that the change has gone through the intermediate step of an *o*, and that the loss is of a *v*.

As to *r*, it need only be remarked here that its not infrequent retention in the Veda before a surd in composition (as *svarah*, *pārpati*, etc.) indicates that there may be an element of artificiality in the later rule whereby *r* shows in such positions the same form which a *s* would show.

10. On Zoroaster and Zoroastrianism, by Mr. J. N. Fradenburgh, of Franklin, Pa.; presented by the Corresponding Secretary.

Mr. Fradenburgh begins with referring to the notices of the Persian religion found in the Bible and in the classical authors. He next sketches the history of later European study of the Zend language and writings; he describes these writings; and he then proceeds to a characterization of the religion and an account of its founder, and closes with a description of the present condition of its followers, the Parsis.

11. On the present Attitude of Islam, by Prof. J. W. Jenks, of Newtonville, Mass.

Prof. Jenks glanced at the changes in the relative position of Christian and Moslem powers which have taken place during the past three quarters of a century, and the increased ascendancy of the former, and related a few incidents of his own experience in connection with them. He urged the performance of certain duties toward the now thoroughly subordinated Mohammedans: to furnish them with a Christian diplomacy and code of international law, which, in the interests of peace, should be enforced on Moslem and Christian nations alike, and a representative world's congress; to impose entire religious toleration; to acknowledge a religious fellowship between Christian and Moslem; and to cease misunderstanding and condemning Moslems and their belief.

After the conclusion of this paper, the usual vote of thanks to the American Academy for the use of its room was passed, and the Society adjourned, to meet at New York in October next.

Proceedings at New York, October 28th, 1880.

The autumn meeting was held in the Chapel of Columbia College, New York City, on Thursday, October 28th, 1880, commencing at 10 o'clock A. M.

The President, Vice-Presidents, and Recording Secretary being absent, Rev. W. Hayes Ward, D.D., of New York, was called to the chair, and Prof. C. H. Toy, D.D., of Cambridge, Mass., was appointed secretary *pro tempore*.

The Society accepted with thanks an invitation from Chanc. Howard Crosby, D.D., to meet socially in the evening at his house. A lunch was provided at noon by the liberality of persons connected with Columbia College, in the College refectory.

The Directors gave notice that they had designated Wednesday, May 25th, 1881, as the day of the next annual meeting, and the Recording Secretary and Dr. N. G. Clark, as Committee of Arrangements for it. They also recommended for Corporate Membership the following persons, who were thereupon duly elected by ballot:

Rev. Gustav Gottheil, of New York;
Rev. Adolphus Huebsch, of New York;
Mr. W. W. Rockhill, of Baltimore, Md.;
Rev. W. H. Sloan, of Albion, N. Y.

The Corresponding Secretary read extracts from the correspondence of the past half-year.

Rev. C. Bennett writes from Rangoon, in July, 1880, along with a donation to the Library of a number of missionary publications, in Burmese, Shan, and Karen:

"... There has not been much doing here for some time in the way of languages, but recently a professor of Pali has been attached to the Government High School, who is making researches in Pali as it exists in Burma. He has unearthed some old inscriptions on slabs that have been buried on the east side of Shway-da-gong Pagoda, but so recently that I am unable to report further upon them.

We have lately added to the Shan literature a "Manual" in Shan and English, by Rev. Mr. Cushing, and have in press, and nearly half completed, a Shan-English and English-Shan dictionary.

We have also in press a revised and enlarged edition of Dr. Judson's Burman and English Dictionary, but it has as yet only got into the second consonantal letter.

The Government is bringing out a valuable publication, in two quarto volumes. The one volume is a Gazetteer of British Burma, and the other an Introduction containing all accessible reliable information, historical and ethnological etc., on the country, including a good portion, if not all, of what was valuable in the work of Dr. Mason on Burma. The manuscript of his revised "Burmah" went into the hands of the Government soon after his death, and has remained there for years, although there was at one time talk of printing it."...

Communications were then presented, as follows:

1. On the Alexandrian Obelisk, or so-called Cleopatra's Needle, in the New York Central Park, by Prof. G. Seyffarth, of New York.

Prof. Seyffarth referred briefly to the circumstances of gift and transfer of the obelisk, gave its dimensions, and proceeded to discuss its origin and antiquity. He pointed out that the popular opinion connecting it with Cleopatra has no foundation, as it was re-erected at Alexandria in the eighth year of the emperor Augustus, or B. C. 20, consequently after Cleopatra's death, and bears the names and titles of two kings who reigned earlier by eighteen and sixteen centuries; so that it was probably one of the works overthrown by Cambyzes, B. C. 520. The two kings are Thuthmos III. and Ramses II. Prof. Seyffarth went on to discuss their age, and maintained that the former was the Pharaoh drowned in the Red Sea at the exodus of the Hebrews, which he believed to have taken place B. C. 1866; while Ramses the Great died B. C. 1664.

2. On the Worship of Ancestors in China, by Pres. W. A. P. Martin, of Peking, China.

A very brief abstract of Dr. Martin's paper is as follows:

Ritual observances occupy a large place in the Chinese scheme of government. Of these, none are cherished and inculcated with more care than those connected with the worship of ancestors. The Emperor sets an example of filial piety by associating his ancestors with Shangti, the Supreme God, in the sacrificial offerings which, as high priest of the empire, he makes at the temple of Heaven; tablets inscribed with their names being ranged on the right and left of that which bears the august name of the Ruler of the Universe.

Each family worships its own forefathers—twice a year at the cemetery, and twice a month at the family temple.

The influence of these rites has been no less beneficial than profound. They constitute a potent bond of social union; supply motives to deter from evil, and stimulate to good; and through ages past they have contributed to keep alive the popular faith in a future state.

This form of religion, though traceable in remote ages, derives its binding force largely from the authority of Confucius. As taught by him, it was free from two objectionable features: namely, the practice of invoking the spirits of ancestors as tutelar deities, and the superstitious belief that the location of their tombs has an effect on the destinies of their posterity.

Chinese of the upper classes, and indeed of all classes, are often deterred from embracing Christianity by being required to renounce the worship of their ancestors. Is it necessary to subject them to this ordeal? May they not be taught to abandon those superstitions which are excrescences on the ancient system, and yet retain the spirit and essence of an institution which might thus be rendered purely commemorative?

3. On the reading of the Syriac Versions of Luke xxiv. 32, by Prof. Isaac H. Hall, of Philadelphia.

Prof. Hall presented the results of his investigations upon this point (which he had communicated at greater length to an English society) in substance as follows:

The Curetonian Syriac is known to read *ܕܡܐ*, 'heavy,' instead of *ܕܡܐܐ*, 'burning,' in Luke xxiv. 32; and it seems to be thought by the critics to be supported only by the Thebaic, and perhaps by the Armenian. (See, for example, Scrivener's Plain Introduction to the Criticism of the New Testament, ed. 1874; and ed. viii. of Tischendorf's Critica Major N. T., at the passage in question.)

The difference between the two readings depends solely upon a single point of the last letter. At the top it gives the first reading, at the bottom the second. No one conversant with Syriac MSS. will readily admit that the point has been misplaced by a copyist's mistake; it rather dates back to the time when the Syriac *doluth* and *rish* came first to be distinguished from each other by points;

when, most likely, the Syrians affixed the one which gave the meaning they had come already to apply to the unpointed letter.

The additional testimony I have found to this reading is the following:

A. *The Philoxenian or Harclean Syriac.* 1. The Codex I discovered in Beirut in 1876, nearer to the original Philoxenian than to the Harclean, reads **ܕܐܕܐ**, which is the same reading with only the prefix conjunction *dolath*. 2. White's edition (Oxford, 1778) of the Philoxenian, the only one yet printed, reads **ܕܐܕܐ**; which is the same reading as that of the Beirut codex, except that (perhaps by a printer's error) the second *yād* is omitted. White indeed translates by '*ardens*;' but as he gives the Philoxenian margin *κατοικεον*—inexplicable if the original Syriac in the MS. or MSS. read so as to mean *ardens*—it is probable that White has made a mistake in translating, and given the right letter in the text. As it is, White's text has the verbal form instead of the participial.

B. *The Peshito.* 1. The above Philoxenian and Harclean readings are no slight testimony to the ancient Peshito reading. 2. The *editio princeps* of Widmanstad, 1555, reads **ܕܐܕܐ**. This was based on two Jacobite MSS., of alleged excellence. 3. The Four Gospels, printed by the British and Foreign Bible Society in 1829, based on one Nestorian MS. brought from Mosul by the missionary Wolff, has also the reading **ܕܐܕܐ**. 4. The American missionaries to the Nestorians found this to be the reading of the ancient MSS. there, and the one current among the Nestorian ecclesiastics. (See Dr. Justus Perkins' Residence of Eight Years in Persia [Andover, 1843], throughout, and particularly pp. 16, 17, where he specially mentions the fact, and the testing of one MS.). Dr. Perkins translated the Peshito New Testament into Modern Syriac, and in the translation gave the equivalent of this reading in the text, with that of the Greek in a foot note. This was several times reprinted; but in the American Bible Society's Mod. Syr. N. T. of 1864, the text is changed to correspond with the Greek, for the reason that the Bible Soc. declined to print any more editions unless they were made to conform to the Greek. The American missionaries also issued the Peshito, the Old and New Testaments separate, in parallel columns with the Modern Syriac. This has always retained this reading; which, moreover, has never been thrust out by the American Bible Society; for it appears in their edition of the Ancient Syriac printed in New York in 1874. Under this head is also to be mentioned a Nestorian MS. deposited by Dr. Perkins at the A. B. C. F. M. rooms at Boston, and still there. It is of the 12th century, and has the same reading. 5. A Syriac Lectionary (presented at this meeting), which generally gives the church lessons after the Greek order, which was obtained by Dr. C. V. A. Van Dyck from the papal Jacobite Monastery in Damascus, has the same reading; only by accidentally omitting the second *yād*, the word has the verbal instead of the participial form. The Lectionary is of the 12th or 13th century. 6. An ancient Jacobite MS. of the four Gospels in the library of the Union Theo. Sem. in New York, wrongly supposed by its custodians to be Nestorian, of the 10th to 12th century, has also the same reading. 7. An Evangelistarium in the library of the American Bible Society, written in splendid Estrangela, with here and there a note in Jacobite, said to be arranged after the Jacobite order, and probably of the 13th century, has also this reading.

There is thus a *prima facie* case made out for the supposition that this is the true reading not only of the Curetonian, but also of the Philoxenian (or Harclean) and the Peshito. But the last word is to be said by the abundant MSS. in Europe.

4. Statistics of External Vowel-Combination in the Rig- and Atharva-Vedas, by Prof. W. D. Whitney and Mr. W. Haskell, of New Haven; presented by Prof. Whitney.

Prof. Whitney stated that, at the last meeting of the Society (see Proceedings for May, 1880: Journal, vol. xi., p. xxxii.), when discussing the laws of external *sandhi* of vowels in Sanskrit, he had drawn attention to the notable difference of usage in Vedic verse as regards, on the one hand, those combinations in which there is a coalescence of final and initial into a single vowel or diphthong, and, on the other hand, those in which an *i*- or *u*-vowel precedes a dissimilar vowel,

and, in order to the union of the two syllables into one, would have to be semi-vocalized, into *y* or *v* (*w*)—the former being usual, the latter only exceptional. He was not able, at the time referred to, to speak with the desirable degree of precision in respect to this usage, but had since taken pains, with the help of Dr. Haskell, to make such examination of the two leading Vedic texts as enabled him to supply at present what had then been left wanting. Dr. Edgren, namely, has set forth with sufficient fulness (Proceedings for October, 1878; Journal, vol. xi., p. 71) the Rig-Veda usage as to the combination of a final *i*- or *u*-vowel with a following initial in word-composition; the speaker had added the facts as to the treatment of coalescing vowels in the same situation; and he had further assembled the corresponding facts from the Atharvan text. Then, in order to bring in the other division of the external *sandhi*, that regarding the combination of separate words in the sentence, he had noted all the facts from a sufficient part of the Atharva-Veda: namely, the first four books and the tenth book (for certain particular combinations, from the whole text); and Dr. Haskell had done the same for books three and four of the Rig-Veda text, which, considering the general uniformity of the phenomena, was regarded as illustrating fully enough the Rig-Veda usage as to the points in question. The results are presented below, in tabular form.

First are given the combinations of *i* and *u* with a following dissimilar vowel in composition, the data for the Rig-Veda being taken (with some corrections and additions) from Dr. Edgren's article above referred to. As also in the next table, the numbers of separate stems and of their occurrences are given separately.

| | Rig-Veda. | | | | Atharva-Veda. | | | |
|-------------------|-----------|------|-------------|------|---------------|------|-------------|------|
| | Combined. | | Uncombined. | | Combined. | | Uncombined. | |
| | st. | occ. | st. | occ. | st. | occ. | st. | occ. |
| <i>i</i> + vowel, | 9 | 16 | 51 | 173 | 21 | 29 | 44 | 103 |
| <i>u</i> + vowel, | 6 | 25 | 66 | 349 | 6 | 10 | 22 | 67 |
| Total, | 15 | 41 | 117 | 522 | 27 | 39 | 66 | 170 |

The compounds of *ac* or *añc* are excluded here, as in the statements below, although they might properly enough, at least in most cases, have been reckoned with the rest. The ratio of occurrences of combination of the two syllables into one is, it will be seen, for the Rig-Veda about 1 to 13 (7.3 per cent.); for the Atharva-Veda, about 1 to 4½ (18.7 per cent.). The difference between the two is evidently not fortuitous, but shows an increasing frequency of combination in the later text; although the cases of it still constitute only a small minority.

Next follow the data for the treatment in composition of vowels that coalesce into a single vowel or diphthong:

| | Rig-Veda. | | | | Atharva-Veda. | | | |
|-----------------------------|-----------|------|-------------|------|---------------|------|-------------|------|
| | Combined. | | Uncombined. | | Combined. | | Uncombined. | |
| | st. | occ. | st. | occ. | st. | occ. | st. | occ. |
| <i>a, ā</i> and <i>a, ā</i> | 115 | 312 | 19 | 79 | 123 | 645 | 11 | 13 |
| " " <i>i, ī</i> | 19 | 27 | 4 | 4 | 13 | 27 | | |
| " " <i>u, ū</i> | 16 | 45 | 4 | 8 | 12 | 27 | 2 | 2 |
| " " <i>ṛ</i> | 3 | 7 | | | 10 | 34 | 1 | 1 |
| " " <i>e, ē</i> | 2 | 3 | 2 | 2 | 6 | 9 | 1 | 1 |
| " " <i>o, ō</i> | 6 | 8 | 2 | 2 | 5 | 44 | | |
| <i>i, ī</i> " <i>i, ī</i> | 9 | 32 | | | 5 | 5 | | |
| <i>u, ū</i> " <i>u, ū</i> | 6 | 22 | 1 | 1 | 2 | 2 | 1 | 1 |
| | 176 | 456 | 32 | 96 | 176 | 793 | 16 | 18 |

Here, as is evident at a glance, the relation of the cases of combination to those of maintained independence of the vowels is directly reversed. The hiatus remains, in the Rig-Veda, in only about 1 case out of 6 (or in 17.4 per cent. of the occurrences); in the Atharva-Veda, in less than a fortieth of the cases (2.3 per cent.): the latter text, as before, showing a noticeable advance toward the usages of the later Sanskrit.

The data for the combinations of the sentence are presented below in a single comprehensive table, and with greater detail as regards the different vowels concerned. The numbers marked with an asterisk (*) include the cases occurring in the whole Atharvan text; the others, only those found in the passages defined above (RV. iii, iv.; AV. i.-iv., x.).

| Coalescing vowels. | Rig-Veda. | | Ath.-Veda. | | Semivowel conversion | Rig-Veda. | | Ath.-Veda. | |
|--------------------|-----------|--------|------------|--------|----------------------|-----------|--------|------------|--------|
| | com. | uncom. | com. | uncom. | | com. | uncom. | com. | uncom. |
| a and a | 84 | 22 | 204 | 23 | i and a | 2 | 107 | 40 | 63 |
| " " a | 23 | 3 | 53 | 3 | " " a | 0 | 29 | 6 | 29 |
| " " i | 54 | 5 | 99 | 8 | " " u | 1 | 16 | 3 | 15 |
| " " i | 6 | | 12 | | " " u | | 1 | 2 | |
| " " u | 14 | 3 | 25 | 2 | " " r | | 3 | 2 | 6 |
| " " u | 2 | 1 | 3 | 2 | " " e | | 13 | 7 | 15 |
| " " r | 10 | 1 | 23* | 5* | " " di | | 2 | | |
| " " e | | | 40 | 1 | " " o | | 6 | 2 | 9 |
| " " di | 5 | 3 | 1 | | " " du | | | 1 | |
| " " o | | | 8 | 2 | | | | | |
| | 198 | 38 | 468 | 46 | i and a | 3 | 177 | 63 | 137 |
| a and a | 101 | 7 | 133 | 23 | " " u | 0 | 8 | 4 | 11 |
| " " a | 8 | 1 | 20 | 3 | " " u | 1 | 1 | | 3 |
| " " i | 77 | 2 | 70 | 3 | " " u | | 1 | | |
| " " i | 2 | 0 | 3 | | " " r | | 2 | | |
| " " u | 12 | 1 | 15 | 7 | " " e | | 1 | | 4 |
| " " u | 2 | | 1 | | | | | | |
| " " r | 5 | | 6* | 6* | u and a | 1 | 13 | 4 | 18 |
| " " e | 2 | | 20 | 4 | " " a | 0 | 45 | 10 | 66 |
| " " o | | 1 | 1 | | " " a | | 19 | | 13 |
| | 209 | 12 | 268 | 47 | " " i | | 5 | 2 | 1 |
| i and i | 9 | 2 | 58* | 7* | " " i | 1 | | | 1 |
| " " i | 2 | 1 | 4* | 2* | " " r | | 1 | 1 | 1 |
| " " i | 7 | 3 | 23* | 9* | " " e | | 1 | 1 | 11 |
| " " i | 1 | 0 | | | " " di | | | | 3 |
| u " u | 0 | 2 | 1* | 10* | " " o | | 2 | | 11 |
| | | | | | " " du | | | | 1 |
| | 19 | 8 | 86 | 28 | | | | | |
| | | | | | | 1 | 73 | 14 | 108 |
| | | | | | | | | | |
| Total | 426 | 58 | 822 | 121 | | 5 | 263 | 81 | 263 |

It appears from this table that in all respects, with regard to the two classes of vowel-combination, the usage is closely parallel in sentence-collocation with the usage in composition. As between coalescing vowels, the combination is actually made in the Rig-Veda in more than seven-eighths (88 per cent.) of the instances; in the Atharva-Veda, in almost precisely the same proportion (87 per cent.). But in cases involving conversion to a semivowel, the combination is made in the Rig-Veda only in one-fiftieth of the instances (2 per cent.); in the Atharva-Veda, in less than a quarter (24 per cent.). And here, as in the cases treated above, the usage of the Atharvan, as compared with that of the Rik, makes a perceptible advance, though by no means a near approach, toward that of the later language.

5. On Certain Points connected with Chaldean Seals, by Rev. W. Hayes Ward, of New York.

In his paper, *Empreintes de Cylindres Assyro-Chaldéens*, M. Ménant has stated his objections to regarding the temptation of the first pair as represented on an ancient cylinder, on which are figured, apparently, a man and a woman sitting one on each side of a tree, plucking its fruit, while behind the woman is an erect serpent. George Smith (Chaldean Genesis, p. 91), gives this interpretation, and is followed by Delitzsch and Baudissin. But Ménant says that the two personages "are two men, such as are found on numerous analogous cylinders;" that "the

tree has nothing in common with the tree of the terrestrial paradise;" and, finally, that "the serpent appears in this scene only as in a large number of others, where his presence is as yet unexplained." It were to be desired that M. Ménant had referred us to the "numerous analogous seals" which he speaks of. The appearance of the serpent is quite rare on the seals. In 111 seals and cylinders published by Ménant, there is not another representation of the serpent. Among 30 or 40 figured by Layard, not one contains a serpent. In Lajard's *Culte de Mithra*, the best collection published, out of about 200 there is only one other that contains a serpent, and that is the chief figure of the cylinder, having a human head and six folds. In Cullimore's Oriental Cylinders, 4 out of 169 seem to contain a serpent, probably Cabiric. Besides, there is Dr. S. Wells Williams's cylinder, on which a serpent takes the place of the usual griffin pursued by Merodach. The serpent does not seem to have been a common emblem. As to the tree having "nothing in common with the tree of the terrestrial paradise," it is not clear how M. Ménant knows this. No monumental testimony explains the worship of the tree, and there is evidence that it was called the "tree of life." That there should have been a legend of the Fall corresponding to that in Genesis, is in itself probable. As to the two figures being both masculine, there is no evidence offered, and the statement lacks probability. One of the figures is plainly masculine, although the usual beard is not given in the representations published. But the arrangement of the hair on the back of the head, and the horns, fix it as masculine. The other figure is without beard or horns, and there are no masculine signs. Ménant says (*Empreintes*, p. 46) that, in the frequently recurring group on the cylinders, where a bearded god sits on a throne and a beardless personage in a flounced dress and a peaked cap, and with a waving horizontal lock of hair behind, leads by the hand another beardless figure, as if presenting it to the god, the two beardless figures are also both masculine. But this flounced figure, which occurs scores of times, is never bearded, and must be feminine. Ménant says there are cylinders in which the "neophyte" led in is bearded. This is true, and there are also cases where it has the head of a bird, probably the wicked Zu bird; and it disproves the notion that this is the virgin brought every night to the bed of Belus; but a better explanation is that there is figured a scene in Hades, and that souls of the dead, male or female, are being brought for judgment to the god Hea. The streams occasionally flowing from the sitting figure show it to be Hea. Figure 18 of Cullimore's Oriental Cylinders, in which two figures, unquestionably male and female, sit one on each side of a table, is convincing evidence that a male and a female figure may be put *vis-à-vis*: compare, also, the famous cylinder of Dungi, where a bearded and a beardless figure stand one on each side of a similar tree with hanging fruit, best figured in Tompkins's *Times of Abraham*, Pl. III., H. The only evidence against the cylinder under consideration representing a legend of the temptation is found in Ménant's Catalogue of the Cylinders in the Museum of the Hague, fig. 14, where is seen a very similar tree with depending fruit, and a standing feminine figure on each side plucking it, while one hands it to a third female figure. There is here, however, no serpent.

Another question is raised by the notched or saw-like sword, always carried in the right hand by one of the gods, who appears regularly with profile face to the left, and with the right foot raised and resting on a square support, as in Cullimore, figs. 29, 44, 45, etc. This is probably the same god as the seated winged figure, Lajard, L. I., and again, standing between two cones, in Smith's Chaldean Genesis, p. 159. I would suggest that this notched weapon was of wood with flint teeth set in the edge, as in the case of the Mexican weapon called *maquahuil*: see Stephen's Yucatan, i. 413. It is noticeable that two of the hieroglyphics in the Hittite inscriptions, Nos. 10 and 44 of my catalogue, are weapons of a very similar sort. I do not, however, know other evidence that weapons armed with flints were ever in use in the Old world.

Mr. Smith, in his Chaldean Genesis, pp. 158-9, gives figures of three cylinders which may, he thinks, represent the building of a tower, perhaps of Babel: see other figures, Lajard, xviii. 3, 4; xl. 8; xlii. 13; Cullimore, fig. 165; and Ménant's Catalogue of the Hague, 15, 16. These can hardly be towers. When most perfect, they seem to have projections on one side at the top and bottom on which to swing. The ornamental lines on top of them in one cylinder hardly agree with

towers. Can they be a portable sacred column, to be carried about and stuck in the ground where wanted? In one case this "tower" is adorned with two wings like those of the divine circle, and has a stream flowing from near its top into the lap of a woman on one side, and on the other to the ground, where a man puts his hands into it. The wings can hardly belong to a gate or a tower. They represent a special divine influence, as does, probably, the stream. In a cylinder in Smith's Chaldean Genesis, p. 106, of much later date, two streams descend from a divine winged circle, which the Assyrian king is holding, as if to receive the divine influence.

6. A Greek Inscription from over a city-gate in Beirût, by Prof. Isaac H. Hall.

Though the city of Beirût has long outgrown its old walls, yet much of the wall and several of the gates still remain. One of these, a minor one, stands over an alley—a very respectable ancient street, however—which leads off into the old city from the wide street running from near the American press down to the Place du Canon. The level of the alley is now some seven or eight feet below that of the wide street, and the width of the gateway is six or seven feet. Over the gateway is an arch; but under the arch, and forming a supplementary lintel, are two long stones, one above the other, each bearing two lines of an inscription. The lines are about eight feet long and the letters about three and a half inches high. The stones and the inscription are much older than the wall or the gateway, and were apparently built in for their preservation. The letters are not deeply cut, but are quite legible. Their shape gives no certain clue to their date. The letters *sigma* and *epsilon* have the rounded forms of the uncial manuscripts; the *lambda* nearly that of the cursive character, though it does not project above the line; the *theta* is a circle with a dot in the middle; and the *omega* is like those of the uncial manuscripts, but turned upside down. There is no division between the words.

Shortly before I left Beirût I went down to copy the inscription, in the blazing noonday; but having no ladder, the nearest approach to copying on a level was to stand on the supporting wall of the wide street above, some twenty feet off. Then I could descend and come nearer; but, in any way I could manage it, the inscription was several feet away. I suspect, therefore, that I have made a mistake or two in the copy, which will be noticed presently. The following is the copy as I made it:

- (1.) ΤΗΤΟΥΠΡΟCΙΟΝΤΟCΑΝΔΡΟCΕΝΝΟΙΑCΑΕΙ
- (2.) CΑΦΕCε ΖΕΓΧΟCΗΠΡΟCΘΥΓΕΤΕΙΝΕΚΑΙ
- (3.) ΔΙΔΟΥΠΡΟΘΥΜΟCΟΠΑΡΕΧΕΙCΗΜΗΔΙΔΟΥ
- (4.) ΠΑΡΑΓΑΡΤΟΜΕΙΚΡΟΝΤΕΙΝΕΤΑΙΠΑΗΡΗCΧΑΡΙC

On studying the inscription carefully, it seems all right except the second line. The lines are four verses of iambic trimeter, but neither sense nor meter is apparent in the second line as it now reads. The natural emendations to be thought of are an *η* for the first *ε* (though as inscriptions are cut and manuscript's are written, the two letters sometimes change places); a *ζ* in place of the *ε* after *οψι*, as the difference consists only in the middle stroke, for which I have doubtless mistaken a scratch; and a *τ* for the *κ*. These emendations had suggested themselves some time ago; but to get a better opinion, I submitted the copy to Dr. Drisler, of Columbia College, who independently suggested the same. Meanwhile I have written to Beirût for a new examination of those points. The probability is that I have made the mistakes; but I have found heretofore that stone-cutters and scribes do sometimes make mistakes of their own.

Adopting these emendations, the inscription becomes, written in modern shape:

Τῆς τοῦ προσιόντος ἀνδρὸς ἐννοίας ἀεὶ
σαφὲς ἐλεγχος ἡ πρόσσους γέινεται·
δίδου προθύμως ὃ παρ᾽ ἔχεις ἢ μὴ δίδου·
παρὰ γὰρ τὸ μεικρὸν γέινεται πλήρης χάρις.

Of the disposition of the approaching man ever the sight becomes a clear proof:

give readily what thou hast by thee, or give not; for with the little comes full favor.'

Whether these lines are taken from one of the (comic) poets or not, I do not know; but if so, this stone copy is probably as ancient authority as any extant manuscript. I suspect that they formerly occupied a place in connection with some Greek ecclesiastical building. One cannot help thinking, however, of the famous law-schools and other semi-gospel institutions of Berytus, among which the *Xenodocheia* were very prominent. The student of the Pandeets can raise many conjectures. At present the inscription is directly across the way from the institution of the French Sisters of Charity.

7. On the *Ikhwan as-Safa* or 'Pure Brothers,' by Rev. A. Huebsch, of New York.

The following is a brief summary of Dr. Huebsch's paper:

The association of Arabian philosophers bearing this name flourished in the 10th century. A monument of their activity is the encyclopedic work which is styled "Treatises of the Pure Brothers." This cyclopedia consists of fifty-two treatises, comprising all branches of knowledge. Corresponding to the four degrees of the order, knowledge was divided into four divisions: 1. the mathematico-philosophical division; 2. physical science; 3. psychology; 4. the divine law. The subjects of the treatises are: i. On numbers; ii. Geometry; iii. Astronomy; iv. Geography; v. Music; vi. Arithmetic and geometric relations; vii. Arts of knowledge; viii. Arts of practice; ix. Ethics; x. Introduction to philosophy; xi. The ten categories; xii. Hermeneutics; xiii. Apodictics; xiv. On matter and form, space and time; xv. Heaven and earth; xvi. Composition and decomposition; xvii. Celestial phenomena; xviii. Minerals; xix. Essence of nature; xx. Plants; xxi. Animals; xxii. Organization of the human body; xxiii. Sense and sensible things; xxiv. Embryonic development; xxv. Man a *mikrokosmos*; xxvi. Development of the individual soul in human bodies; xxvii. Limits of human knowledge; xxviii. Proper significance of life and death; xxix. On bodily and spiritual pleasure and pain; xxx. On the variety of languages; xxxi. The principles of reason according to Pythagoras; xxxii. The principles of reason according to the views of the Pure Brothers; xxxiii. The world a *makrokosmos*; xxxiv. The understanding and its object; xxxv. Revolutions of the stars and spheres; xxxvi. The soul's love; xxxvii. The resurrection and future life; xxxviii. Quantity and variety of motion; xxxix. Cause and effects; xl. Definitions and determinations; xli. Difference of view on principles of creed; xlii. The right path to God; xliii. Creed of the Pure Brothers; xliv. Life of the Pure Brothers; xlv. True contents of the Mohammedan creed; xlvi. Essence of the divine *nomos*; xlvii. The call to God; xlviii. Spirits and their actions; xlix. Forms of government; l. The order and succession of beings constitutes the existence of the world; li. On witchcraft; lii. A descriptive index of the preceding treatises.

To Prof. F. Dieterici, the principal authority on the *Ikhwan as-Safa* and their writings, we are indebted for accurate information on this subject, furnished in his excellent book, *Die Philosophie der Araber im Xten Jahrhundert nach Chr.*

Though the volumes of the Pure Brothers are pervaded by a deeply religious spirit, the principle confessed by the authors, that the Mohammedan religion had become adulterated and that the only way to purify it was to bring it into close alliance with Greek philosophy, was sufficient to stamp the members of this order with the stigma of heresy in the eyes of every orthodox Mohammedan. Thus it came that little mention was made of the fraternity by Arabian writers; and as no author signed his name to the volume he composed, we should be in utter ignorance to whom the authorship of this little but very significant library belonged, if Shahrzuri had not been less scrupulous than the other pious chroniclers: he mentions five men as the authors of the fifty-one treatises, and Haji Khalfa gives the following names: 1. Abu Suleiman Muhammad ibn Nasr al Busti, surnamed al mukaddisi; 2. Abu-l-Hasan Ali ibn Harun az Zanjani; 3. Abu Ahmed an Naharjuri; 4. Al 'Aufi; 5. Zaid ibn Rifa'a.

The paper concluded with a translation of the parable on how the Pure Brothers should live.

8. On a Manuscript Syriac Lectionary, by Prof. Hall.

This manuscript was obtained by Dr. C. V. A. Van Dyck, of Beirût, from the papal Jacobite convent in Damascus. For a Syriac MS. its contents are uncommon. They consist of a Lectionary in the Syriac language, but arranged after the Greek order. The Lectionary consists of an Evangelistarium, or Gospel lessons for the ecclesiastical year, and a Menology, or calendar of saints' days or feasts for every day in the civil year. The beginning of the Evangelistarium is gone; but the beginning of the Menology expressly states that it is "after the Greek order."

Externally, the manuscript appears to be in the original binding: heavy wooden boards covered with leather. The traces of metallic ornaments appear on both sides, and the two stout brass pins which caught the clasps are still there.

The MS. now contains 95 leaves of ancient, tough cotton paper (*charta Damascena*), glazed after the fashion of the better oriental paper MSS., and somewhat worm-eaten and worn, especially at the two ends. It originally consisted of 13 quires of 4 folios or 8 leaves each, except two, which had 5 folios or 10 leaves each. Besides the regular numbering of the quires or signatures, some later hand has added the same in Arabic—in words, not figures. This latter writing, however, is older than the current script of to-day. Originally there were 108 leaves, of which 13 are now missing. In nearly every case where a leaf is gone, a slight stump is left, besides the other plain evidences. The worm holes present no obstacle to the reading; the only difficult places are those where water has damaged the upper half of the first twenty leaves, with a few smaller spots elsewhere. In a few places, not half a dozen lines in all, a second hand has retraced the reading where it had been destroyed by water, along with the glazing.

The writing is in two columns to the page, 34 lines to the column. At the end of each principal division of the subject matter is usually an ornament, occupying the space of from one to four lines. Otherwise there is scarcely a break. In one, or perhaps two places, a space left for a rubric has remained unfilled; and here and there a blank is left at the end of a line where the end of the paragraph does not quite fill it. The height of the columns is 7 to 7½ inches, the width of the inner column 2¼ inches, of the outer 2½. The space between the columns is ⅓ of an inch.

The style of writing is a mixture of the Estrangela with the Jacobite; the latter more of the Palestinian than of the Mesopotamian type. Ornamental initials conform generally to the old Estrangela, except in case of *olaph*, which occurs in the greatest variety of shapes, but never in the marked Nestorian form. It is easy, on the whole, for one acquainted with the Estrangela to read the character, but not for one who is familiar only with the common printed varieties.

There may have been two scribes. The handwriting is bolder in the later portions of the MS., and a few constant errors and misspellings in the first portions disappear in the later.

In both the Evangelistarium and the Menology there appears here and there an auxiliary lesson note in Arabic; but these are only fourteen in all. They are written in the older Neskhî, but not as early as the transition from Cufic. Some of them appear to note lessons after the Syrian order. In one place mention is directly made of the coincidence with the Syrian lesson for a saint's day. Thus the contents of the MS., together with the actual mention of "the Greek order," fix the limit of its antiquity in the 12th century, and at the same time forbid assigning it to a much later date. With this the style of writing agrees; except that it seems to shut out the 12th century, and confine us to the 13th. It is not probable, though it is barely possible, that it was written early in the 14th. The early half of the 13th is the more probable date.

In the rendering of ecclesiastical terms, personal epithets, and the like, the genius of the MS. inclines to the Syriac rather than to the Greek; though here and there a Greek genitive seems to be transferred. Such words as Chrysostom, Theologus, Stylites, Theotokos are translated into their Syriac equivalents. The transliteration of foreign words, including proper names, with all the other minutiae which give a clue to the linguistic genius of the MS. show that the writers were pretty thoroughly Syrian, familiar with Arabic, but not well acquainted with Greek. The codex is, so to speak, at the opposite pole from the Syriac and Armenian palimpsest described by Tischendorf in his *Anecdota Sacra et Prof.*, p. 13.

The Evangelistarium agrees very nearly with the Greek lessons as given in Scrivener's *Plain Introduction*, pp. 68-79, and in Smith's *Dict. of Christian Antiquities*, pp. 955 ff., except that it commonly gives only the lessons for Saturdays and Sundays, with the more important fast and feast days. Week-day lessons are given from Easter to Pentecost, in Holy Week, and a few other places. The Menology gives the saints' day lessons for every day in the year, and agrees as often as it disagrees with that given in Scrivener's *Plain Introduction*, pp. 81 ff., and his extracts from the Jerusalem Syriac on pp. 291, 293. Several saints' names occur which I have not found elsewhere.

The scribe has here and there committed an error in writing the name of one Evangelist in place of another, and in writing the abbreviation for "pentecost" where he intended "passover," and the like. He has been (apparently) too free in his use of the diacritic marks which denote the plural. Otherwise diacritic points are rare, and generally confined to those which denote whether a pronoun is used substantively or in place of the substantive verb, and the like.

I have collated the scripture readings with the text of Leusden and Schaaf (ed. of 1708; I have not the 2d, better one), as the most convenient standard: though I think the American Bible Society's edition has a far better text. The version is Peshito, of course. Of the collation no remarks are needed here. It may be stated that the last 12 verses of the Gospel of Mark occur as the third of the eleven "Resurrection Gospels," as might be expected. The *pericope de adultera*, as also to be expected, is ignored in the lesson which covers the context. In the lesson notes occur the notes of the Psalm, or of the Stichera (called *Stichéron* in the MS.); and these generally follow the text of the American edition, and Dathe's Erpenius, and not that of the English edition. One Psalm appears to come from a place outside the Bible. (It is well known that the Psalms, etc., in the Maronite ritual include some from Ephrem, Jacob or James, and other fathers.) In Ps. xlv. 17, several times cited in the MS., the word for 'thy name' has a feminine suffix pronoun, as better fits the context; though the Masoretic Hebrew and the English edition of the Peshito have it masculine.

The church lessons themselves, after the rubrics, most commonly begin with an introductory phrase, such as "At that time," "Our Lord said to the Jews," or "Our Lord said to his disciples." Sometimes they transpose the opening words, or add a word or more to the lesson from the context to make the meaning clear. Thus, "Jesus said," or "Jesus came," for "he said" or "he came." Cases where the *ipsissima verba* of the Gospel begin the lesson are the infrequent exception.

The rubricated portions of the notes are mingled with black, apparently with no other rule than to aid the eye. Abbreviations are very common in the notes, but not in the text, and then they are of the most obvious sort.

As the manuscript now is, it commences in the midst of the lesson for Tuesday after Easter, at Luke xxiv. 18. Gaps in the MS. have taken away also the last four verses from the next Saturday's lesson, all of the next Sunday's, and matter from the lessons of the eve of Good Friday, occupying two leaves. The Evangelistarium is therefore nearly complete; and the missing portions could probably be supplied with certainty. (The paper presented contains a translation of the lesson notes, and gives the scripture places of the lessons.) The lessons for the week days of Lent are quite different from those of the ordinary Greek order.

The Menology commences with Ilûl, or September, and goes through the year. With each month, at the commencement, is stated the number of days, and the number of day-time hours and of night-time hours—with one or two exceptions. The translation of the rubrics of the Menology (given in full in the paper presented) presented many difficulties in the transliteration of proper names. Two words occur for the 'commemoration' of a saint or an event; two words for 'saint,' and two for 'Gospel.' The first two cases present difficulty in close rendering; the last case none at all, as 'Evangel' and 'Gospel' fit the case perfectly. Two expressions occur for 'mother of God;' one literal, the other the Syriac equivalent for θεοτοκος or *Deipara*. The word for 'apostle' is used with a very great latitude, and yet means less than 'missionary.'

In the Menology the gaps, though less in quantity of missing leaves, are harder to fill than those of the Evangelistarium. They are the following: Ilûl (Sept.) 17

to the latter portion of the 1st of Tishrin 2 (Oct.); the latter portion of 18th day of Canûn 1 (December) to latter portion of 3d day of Canûn 2 (January); 21st day of Heziran (June) by error of scribe; latter part of 29th Ab (August) to the end. Lessons, or parts of lessons, are thus wanting for 36 days of the Menology, or about one-tenth of the whole. The lessons are not always written out in full in the Menology, but denoted by reference. The following sample of one of the longer rubrics, taken at random, from the 4th of Canûn 1, or December, shows one style. The passages merely referred to are denoted in brackets; the one unbracketed is written out in full.

"4. Commemoration of Saints Barbara and Juline [or Juliane], and of the pious John of Damascus. Psalm before the Gospel of matins: My soul keepeth thy testimonies and loveth them wondrously [Ps. cxix. 167]. Section: Princes have persecuted me without a cause [Ps. cxix. 161]. Gospel of Matins from Matthew. Saturday 17 from Matthew [Matt. xxv. 1-13]. And in the priestly ministration, from Mark. Mark v. 24-28."

A good many choice bits of history or fable come out, which have not always found elsewhere. In the note for the 9th of Tammûz (July) occurs the following remark, which has a classic as well as an ecclesiastical hinge: "And in this day appeared the mother of God at the trembling water in the mount of Daphne. For she appeared to the apostles and [to] John, when they wandered by the Holy Spirit from Sion mother of the church and established there the first born of Antioch the city of Syria, having obtained mercy with God."

The Scripture passages now in the MS., not counting the short ones inserted for reference, are the following:

Matthew i. 1-25; iii. 13-17; iv. 1-25; v. 1-48; vi. 1-33; vii. 1-11, 24-29; viii. 1-34; ix. 1-13, 18-35; x. 1-8, 16-22, 32, 33, 37-42; xi. 1-15, 27-30; xii. 30-37; xiii. 45-54; xiv. 1-12, 14-34; xv. 21-39; xvi. 13-20; xvii. 1-27; xviii. 1-4, 10-20, 23-35; xix. 3-12, 16-30; xx. 1-16, 29-34; xxi. 1-11, 15-43; xxii. 1-46; xxiii. 1-39; xxiv. 1-51; xxv. 1-46; xxvi. 1, 2, 6-16, 44-75; xxvii. 1-66; xxviii. 1-15.

Mark i. 9-11, 35-44; ii. 1-12, 14-17, 23-45; iii. 1-5; v. 24-28; vi. 14-27; vii. 31-37; viii. 27-31, 34-38; ix. 1, 17-31; x. 32-45; xi. 1-11, 22-26; xv. 16-41, 43-47; xvi. 1-20.

Luke i. 1-68, 76-80; ii. 22-40; iii. 1-22; iv. 1-13, 16-41; v. 1-11, 17-32; vi. 1-10, 17-23, 31-36; vii. 1-23, 36-48; viii. 5-21, 26-39, 41-56; ix. 1-6, 28-43, 57-62; x. 1-12, 16-21, 25-42; xi. 27, 28; xii. 2-12, 16-21, 32-40; xiii. 10-17, 19-29; xiv. 1-11, 16-24; xv. 2-32; xvi. 10-31; xvii. 3-10, 12-19; xviii. 9-14, 18-27, 35-43; xix. 1-10, 28-40; xx. 1-8, 46, 47; xxi. 1-4, 8, 9, 26-27, 33-36; xxii. 1-39; xxiii. 32-49; xxiv. 1-12, 18-53.

John i. 29-51; iii. 1-28; iv. 46-54; v. 1-15, 17-47; vi. 1, 2, 5-33, 35-44, 47-59; vii. 1-30, 37-52; viii. 12-59; ix. 1-41; x. 1-9, 17-42; xi. 1-45, 47-54; xii. 1-50; xiii. 1-8, 31-38; xiv. 1-31; xv. 1-27; xvi. 1-33; xvii. 1-26; xviii. 1-40; xix. 1-42; xx. 1-18; xxi. 1-25.

These are enumerated simply as being present in the MS. The table of lessons would be very different. Besides this, a number of passages from all the Evangelists occur twice, some from Matthew and John three times, and some from John four times. The portions relating to the passion are those which are most repeated.

9. On the connection between verbs of 'putting' and 'giving,' by Prof. Charles Short, of Columbia College, New York.

Prof. Short illustrated the near relation between the verbs signifying 'put' and 'give' principally from the Indo-European roots *dha* and *da*, and their confusions and interchanges of office even in Sanskrit, but still more in the other branches of Indo-European language, especially the Latin. He regarded it as probable that these two roots were twin forms of one original. Corresponding facts from the Semitic and other tongues were adduced.

10. On the Chinese accounts of Fu-sang, supposed by some to designate America, and of other countries described in connection with this, by Prof. S. Wells Williams, of New Haven.

Prof. Williams's paper presented the account given by the Chinese archaeologist Ma Twan-lin respecting Fu-sang and certain other countries lying east of China beyond sea. This eminent author flourished in the troubled times which witnessed the conquest of his native land by the Mongols under Kublai Khan; and he was busy writing his Antiquarian Researches while Marco Polo was travelling about the country (A. D. 1275 to 1295) in the service of the Grand Khan. The date of the deaths of these two men was about the year 1324. Ma Twan-lin's work is arranged in twenty-five books, the last one named Researches into the Four Frontiers; out of its 250 sections, only nine describe the maritime countries on the east. The account of Japan is too long to translate here, and would add nothing to clear up the question as to the identification of Fu-sang. The other eight are translated from the original text, in the order in which they stand, since this order has a bearing upon the position of Fu-sang. They are the following:

Sect. XVI.—*Hia-i*. The land of the Crab Barbarians or Foreigners.

Sect. XVII.—*Fu-sang*. The kingdom of Fu-sang.

Sect. XVIII.—*Nü Kwoh*. The kingdom of Women.

Sect. XIX.—*Wan Shàn*. The kingdom of Pictured Bodies.

Sect. XX.—*Ta Han*. The kingdom of Great Han.

Sect. XXI.—*Chü Jü Kwoh*. The kingdom of Dwarfs.

Sect. XXII.—*Chang-jin Kwoh*. The kingdom of Giants.

Sect. XXIII.—*Liu-kiu*. The kingdom of Lewchew.

The first of the eight is known to refer to the island of Yezo, and the Chinese still call the region by that name. The next country, Fu-sang, is not described by Ma Twan-lin himself; he merely quotes the narrative of the Shaman or Buddhist priest Hwui-shin, who returned from Fu-sang in A. D. 499. This man reported that it lay twenty thousand *li* (about 7000 miles) east of China, and was famous for its *fu-sang* trees, whence it derived its name. The people made paper from the bark of this tree, and also spun thread of which they manufactured cloth and brocade for dresses. They knew how to write, and had an established government. Hwui-shin's account contains several other particulars, which were first made use of by the learned orientalist De Guignes in 1761 to prove that the land thus described was Mexico. This view has been criticised by Klaproth, supported by Neumann, and in China made the subject of papers by Bretschneider and Sampson, who opposed the view of De Guignes. All their arguments were reviewed by Leland in a small volume published in 1875, in which he upheld the original opinion of De Guignes. His conclusion has since found an advocate in the French sinologue Marquis d'Hervey de St. Denis, who had met with some additional information in a Chinese history. Prof. Williams summarized the arguments which make it difficult to regard Mexico as the country spoken of, and mentioned two especially, which are derived from Hwui-shin's report itself. One is the manufacture of *kin* or brocade from the bark of the *fu-sang* tree (*Broussonetia papyrifera*); this fabric, called *nishiki*, is woven of silk and paper, and still worn by the Japanese. He exhibited a specimen of this peculiar cloth which was obtained in 1854 at Hakodaté in Yezo; its iridescence is very remarkable; and no such fabric is known to have ever been woven in any other land. The other proof against Fu-sang being Mexico is the statement that the colors of the king's robes varied with the ten cyclic years which denote the dual action of the five elements, wood, fire, earth, metal, water. This reference shows that at the time the people of Fu-sang knew and adopted the sexagenary cycle for computing time and periods; while no such scheme is known to have existed among any people on the American continent. The probability was strong, therefore, that Fu-sang referred to the island of Saghalien, a part of which once belonged to Japan under the name of Karafto; this conclusion is supported by the old name *Fu-shi koku*, or kingdom of Fu-sang, which the Japanese employ for their own kingdom even to this day.

The 18th in the list is the kingdom of Women, a country only reported on the authority of the same priest Hwui-shin. It seems to refer to one of the Kurile Islands; and a legend of the same nature is alluded to by Col. Yule, in his *Cathay and the Way Thither*, as current in Ma Twan-lin's time.

The notice of the 19th, called the land of Pictured Bodies, is not directly ascribed to Hwui-shin, but to the histories of the same period; it cannot be

decided whether tattooing, or marking the body with colored clay like the North American Indians, is meant. This land would naturally be looked for also among the Kurile Islands, as it is placed 2000 miles northeast of Japan.

The 20th in the list is mentioned by several Chinese authors, and their various accounts of Ta Han only prove that they had no definite idea of its position.

In the next section three separate kingdoms are mentioned: namely, the land of Dwarfs, the Black Teeth kingdom, and the Naked People's Land. The notices are all probably hearsay reports of places in the Indian Archipelago.

The 22d section speaks of a land of Giants, and from the reference in it to *Sin-lo*, or Eastern Corea, one would look for it in the islands between that country and Japan. A small Japanese cyclopedia was shown to the Society, in which a naked giant was represented as holding a richly dressed dwarf standing on his extended palm.

The last of these eastern kingdoms described is Lewchew, but the description confuses the Pescadore and Madji-co-sima groups with their more easterly and civilized kingdom.

The conclusion to be derived from all these various notices of the lands situated east of China is, that Ma Twan-lin had no definite knowledge of any of them from personal observation, and gathered his accounts from the most credible sources at his command, supposing that they were all easily reached by Chinese and Japanese vessels.

11. On Indra in the Rig-Veda, by Mr. E. D. Perry, of Columbia College, New York City.

The primary object of this essay is to give as distinct an account of the god Indra as possible, as he appears in the light shed upon him by the hymns of the Rig-Veda; more especially, to determine with accuracy the position held by him in the Vedic pantheon, and his original significance. his *Naturbedeutung*: i. e. the powers of Nature which lie behind and are symbolized by this striking personification. The preliminary part of the work is of course a searching examination of the hymns themselves, and a conscientious interpretation of all passages in any way bearing upon the subject. Great care is taken to avoid two dangers: on the one hand, that of overhasty combination and comparison with seeming parallels in extra-Indian mythology; and on the other, that of following too closely what may be called the ritualistic tendency, which puts these ancient hymns (which breathe out the freshness of nature, and display the Indian people in the vigor of youth) on the same level with the religious monstrosities of a cunning, subtle ingenious, and yet frivolous priesthood of a later age, and attempts to explain obscure points in the text by not less imperfectly understood details of the later ceremonial.*

The Rig-Veda is the only source from which materials have been thus far drawn. The Brâhmanas show so decided an advance beyond Vedic ideas that great confusion would have followed any attempt to combine them. The same reason prevails with regard to the Yajus. The Sâman contains only 60 or 70 verses not found in the Rik, and these offer nothing of value. A preliminary examination of the Atharvan shows that the results to be obtained from it would not differ materially from those furnished by the Rik, and its discussion has been postponed until later.

The essay is divided into four parts, as follows: I. The primitive conceptions of the Indians regarding Indra, and the powers of nature which are represented under this personification; II. The accounts of Indra's parentage, and the narratives and legends of his birth; III. The functions of Indra in the supernatural and the natural, the physical and the moral world; IV. The conception of Indra as a definite person, and the descriptions of him resulting from this conception.

I. The opinion has prevailed among scholars that Indra was, both in his origin and subsequent development, a sky-god. Roth, in his first published essay on

* To the first of these perils Myriantheus seems to have fallen a prey; his work, *Die Ävins oder Ariachen Dioskuren*, was published at Munich in 1876. The other has often proved disastrous to Alfred Hillebrandt, who is represented in this field by two books, *Ueber die Göttin Aditi* (Breslau, 1876), and *Varuna und Mitra* (1877).

the subject of Indian religion (in Zeller's Theol. Jahrbuch, 1846) calls him the god of the bright clear vault of heaven;* Lassen, in his *Indische Alterthumskunde*, takes substantially the same view, differing from Roth only in regard to the etymology of the name. Wuttke failed completely to grasp the true nature of Indra, and saw him only from the standpoint of the later Brahmanic descriptions. Benfey, Müller, Grassmann, and others call him a sky-god (Grassmann, the god of the bright firmament; the others, the god of the rain-sky).† Ludwig cautiously names him "the god of the sky, under whose protection and guidance stand on the one hand the sun and stars, on the other the phenomena of the thunder-storm;" and adds that this deity seems to unite in his one person the characteristics of several older divinities. Bergaigne, viewing only the ethical side of Indra's nature, maintains that he is less intimately connected with natural phenomena than any other of the Indian divinities. It is here attempted to be proved that for the Vedic period at least Indra is to be regarded, not as a sky-god, but as belonging to a region the conception of which was purely and exclusively Indian—the region of the air, a middle ground between heaven and earth; and that he was above all the personification of the thunder-storm, of the storm in its entire magnificence and grandeur; in which respect he is distinguished from the other storm gods, who represent particular features of that phenomenon.

The most probable derivation of the word *indra* is that proposed by Roth: namely, from the root *in* or *inv*, from which the word is formed with the suffix *ra*, a *d* being inserted, as in Greek *ἀν-δ-ρός, μεση-β-ρία*. Ludwig mentions a Slavonic word, *jedrŭ*, 'swift,' as the only representative of *indra* in Indo-European language.

II. The passages in which reference is made to the circumstances of Indra's birth are numerous, much less so those which afford any clue to the subject of his parentage. They are best divided into four groups: viz. 1. physical accounts, i. e. such as display most prominently the original element of the mythus, the immediate impression made by the observation of natural phenomena, in which details that mightiest of phenomena, the thunder-storm, are described, often with striking fidelity; 2. anthropomorphic accounts, in which Indra's original significance in nature gives place to his humanized form and character, and in which, accordingly, his birth is represented as occurring in accordance with human experience; 3. accounts which mention Indra's parentage, but omit to name or characterize sufficiently his parents; and 4. accounts of his origin which are plainly the results of conscious speculation on the part of the priests. Dyaus or heaven seems to have been thought of as Indra's father, whenever any one particular deity is meant, and as his mother. *Pr̥thivī* or earth. Later views made him a child of Aditi; but the opinion, advanced by Hillebrandt, that this is to be accepted for the Vedic period too, is quite untenable. In several passages Indra is called *putrah çarasas*, 'Son of Might;' accordingly, the name *Çavasī*, applied to his mother in two passages, seems merely equivalent to 'the mighty one,' and gives us no real clue. In the puzzling verse x. 101. 12 we find Indra styled "Son of Nishtigri;" but the word *nishtigri* is met with nowhere else, and no data are at hand to explain it. *Sāyana*, of course, explains it; he makes it equivalent to Aditi.

III. The subject of Indra's functions in the universe is extremely copious, and embraces several questions of equal importance and difficulty. In the various manifestations of his power we find a ground on which he stands in common with other divinities. The most prominent of these manifestations is the battle which he has to fight in the air against the demons who steal the rain and light and withhold them from mortals; the most gracious act of his goodness, the restoration of these blessings to suffering men. His activity in this field brings him into an especially close connection with Trita, concerning whom it is endeavored to prove that he is an older deity who originally performed the functions of the later Indra, and sank gradually into insignificance before the rising national hero; with the

* Roth's latest views, as expressed in the *Pet. Diet.*, differ widely from these. He there calls him the chief of the deities of the middle region, i. e. the air, between heaven and earth.

† Yet in his *Chips*, II., p. 91, Müller styles him the chief solar deity of India!

Ādityas, especially with Varuna, whose lieutenant in a certain field Indra seems to have been, until finally he succeeded his master on the throne of heaven (a question treated of at considerable length in the essay); with the Maruts, the gods of the storm, who support their leader Indra in the storm-battle; with Soma, originally the well-known intoxicating beverage supposed by the simple-minded worshippers to be enjoyed by the god with even greater gusto than they themselves experienced, but before long personified and elevated into a hero of boundless prowess, and associated with Indra in all his exploits; with Brhaspati or Brahmanaspati, the god of prayer; with Agni, the god of fire and lightning, and Vishnu, the sun-god; and with Tvashtar and the Rbhu's, the skillful armorers and artificers. From the notion of Indra's paramount importance in preserving the natural order of the world was developed by gradual stages the belief that he was its creator, in which character we find him celebrated in passages of great sublimity. His benevolence towards his worshippers, finally, is praised in grateful language, and gives occasion for associating with him Pūshan and the two Āyus, the divinities of benevolence *par excellence* among the Indians.

IV. The extraordinary popularity which this robust deity (who in the warlike epic period becomes the supreme unchallenged ruler of the gods) enjoyed among the Indian Aryans was the cause of his being celebrated in the most extravagant language. His personal appearance, his weapons, horses, chariot, his enormous appetite and still more prodigious thirst, are all described with the minuteness and exaggeration characteristic then as now of eastern poetry.

12. On Reformed Buddhism in China and Japan, by Pres. Martin.

Buddhism has always exhibited a remarkable facility of adaptation to the characters and circumstances of the people among whom it has been propagated. Hence the great difference in the aspects of the same religion in Tibet and Tartary, China and Japan, Ceylon and Burma. It might therefore be expected that Buddhism would undergo considerable modifications whenever it was brought into contact with Christianity. This is notably the case in Japan; and the modifications referred to have perhaps shown themselves earlier in that country on account of the lively susceptible character of the people. In illustration of this, the speaker proceeded to give an account of a visit which he had made in company with Mr. Nishima, a native Christian pastor, to a Buddhist College in Kioto, the ancient capital.

The buildings suggest reform by their external appearance, being in the best style of European architecture, and in strong contrast with the famous *Hungkon* temple, to which they are attached. They were erected, it is said, at a cost of 360,000 yen, or \$300,000. The organization is not yet complete, but provision is made for the various departments of instruction usually found in western universities. In the department of Natural Philosophy, the speaker was shown a large collection of apparatus (mostly imported) for the purpose of teaching experimental physics; and in the department of theology he saw a class of forty candidates for the priesthood taking notes of a lecture that was being delivered by a venerable looking Bonze.

The name of the sect to which this establishment belongs is *Shinsiu*, or the 'new doctrine'; and a tract which the speaker received from one of the professors indicates how justly it may claim that designation; explaining that the adherents of the *Shinsiu* have abandoned the practice of compulsory celibacy, renounced ascetic rites, and rejected the worship of all Buddhas or other deities, except Amida, the Unlimited or Eternal. This document further states that the soul is in a state of salvation the moment it exercises faith in the love of Amida: all of which are Christian doctrines under pagan names.

In China such reformed sects are numerous; but they have not in any case approached so near to the adoption of Christian dogmas, and are distinguished from the current Buddhism of that empire chiefly by an attitude of protest against certain forms of popular idolatry.

13. The Sutra in Forty-two Chapters, translated from the Tibetan by Mr. W. W. Rockhill, of Baltimore, Md.; presented by the Corresponding Secretary.

Mr. Rockhill points out in his introductory notice that this brief Sutra, one of the canonical works of Buddhism, has been already twice translated from the Tibetan—by A. Schiefner (1851) and L. Feer (1878); and also once from the Chinese, by Mr. S. Beal (J. R. A. S., vol. xix., 1862). He has been led to make a translation into English from the Tibetan version also by the fact that it contains in a concise form the most important points of Buddhist dogma and morals. The text used by him is the lithographed one published in 1868 by M. Feer from a copy in four languages (Chinese, Tibetan, Mongol, and Manchu) brought to France by the Abbé Huc.

The introduction (placed in the original text at the end of the work), giving the usual history of the importation of Buddhism into China, is as follows:

"In the 24th year of Tiu Tou Wang (the emperor Chao of the Chow) the year of the wood-tiger (1029 B. C.), the 4th month, the 8th day, a body of light coming from the southwest appeared in the king's palace. The king and his ministers, having seen it, questioned the wise men, who answered by the following prophecy: 'It is a sign that a mighty Lord will appear in that quarter (of the world), and that after a thousand years his doctrine will reach this land.'

"After that, in the 53d year of Muh Wang (949 B. C.), in the year of the water-sage, the second month, the 15th day, the Master (Sakyamuni) showed the way to enter into the Nirvana.

"After 1013 years (from the luminous apparition), in the reign *Yung-ping*, (65 A. D.), the eighth of Hân Ming-thi, in the first month, in the night of the 15th day, the king had a dream. A being of more than eight cubits in height, of the color of gold, (whose body) emitted light like the sun, descended into the palace. 'My doctrine,' he said, 'will spread itself gradually over this country.' The following day, (the king) having questioned his ministers (about this dream), the minister Hphu yi (Fu yi) answered him thus: 'Long ago, in the time of Tiu Tou Wang, there was a prophecy made in answer (to a question); this dream of the king's agrees with it.'

"Then the king looked over the old records, and was made happy by finding this prophecy of the time of Tiu Tou Wang. The king sent eighteen men, among whom was the minister Wang Tsun, into the west, to try to discover the teaching of the Buddha.

"They arrived at the kingdom of Yuo-chi, where two men of India of the family of Kacyapa, the Arhat Matangipa and the Pandit Gobharana (helped them) to put on a white horse the fundamental works, the Sutra in 42 chapters and other Sutras, both of the Great and the Little Vehicle, and also a vase full of relics of the Master. (After that) they started back by the road by which they had come. At the end of the 12th month they arrived at the fortress of Lo-yang.

"In six years from that time, the Arhat and the Pandit had converted the unbelievers of the Black Plain (i. e. China).

"After that, the Arhat and the Pandit rising into the air spoke these verses to the king:

'The foxes' whelps are not of the lion's race;
A burning lamp is not like the sun and moon;
A little pond is not like the whole ocean;
Every mountain has not the majesty of Meru;
The cloud of the Law covers the whole world;
The rain of the Law moisteneth the seeds (in the hearts) of all mankind;
By showing wonders and miracles
(The Law) teaches mankind in all quarters of the world.'

"Having spoken thus, they returned to India by means of their magical powers.

"This is the origin and history of this Sutra. Originally it did not exist in Tibetan; but having been put in the Chinese Bkabhgyur (pron. Kanjur), it was translated into the Manchu language by order of the High one guarded by heaven (Kienlung), and translated also into the language of Bod (i. e. Tibet) by Dkah-bchu Subhagagreyadhwa and Dkah-bchu Dhyanaishitamvyasa. It was translated into the language of Sog (i. e. Mongolian) by the learned professor Prajnodayavyasa. The patron of the doctrine of the Victorious (i. e. Jina, the

Buddha), Hing lin, wishing to make known the Law, gave one hundred ounces of silver to have it engraved and printed in the four languages.

"May the seeds of virtue given to those who have become exceeding holy help the doctrine of the Victorious to be widely diffused for many years to come; may there not be in (all) the quarters of the earth either sickness, or famine, or tumult, or quarrelling. May all living beings speedily arrive at that wisdom which has no superior."

14. On the Transliteration of Sanskrit, by Prof. Whitney.

In this paper, the subject was presented substantially as below.

The question of the transliteration of Sanskrit is not merely a part of the vast and difficult one of representing alphabetic sounds in general by Roman letters; it has a quite specific and practical aspect: namely, how are the native Indian characters best to be turned into European ones, in view of the very great use made of the latter by Sanskrit scholars and by philologists generally. Not only are Sanskrit words and forms constantly needing to be quoted in philological works, where the intricacy of the *devanagari* alphabet, and the difficulty of setting it along with our ordinary types, make transliteration necessary; whole volumes, and of every class, are published in the transliterated form, even such texts as the Rig-Veda (Aufrecht), the Taittiriya-Samhitā (Weber), the Aitareya-Brāhmaṇa (Aufrecht), etc. There is nothing illegitimate about this: the language is written in India, to no small extent, in whatever alphabet the writers are accustomed to employ for other purposes; and there is no reason why we may not allow ourselves to do the same.

The systems of transliteration employed are in detail very various, almost every leading scholar and periodical having a peculiar one, more or less different from every other. Respecting only a small minority of letters is there entire agreement: these are *a, i, u, k, g, ṭ, d, p, b, n, m, r, l, s*; although also *t, d, h* are used nearly universally. It is true that this variety causes little practical difficulty, since he who employs one system is but slightly embarrassed to understand any of the rest; and hence scholars need not be strongly urged to abandon methods long employed by them and take up new ones; yet it is evidently desirable that usage should at any rate be made to tend gradually toward unity. The points of discordance are of every kind and degree: in some cases, choice is a matter of indifference, and must be arbitrarily made, merely for the sake of unity; but there are also signs current whose use is decidedly to be reprobated, and, if possible, put down.

In reference to the vowels, in the first place, the leading question is, how long quantity shall be marked. The usual English (and hence also Indian) method has long been to write an acute accent over the long vowel: thus, *ā*. This is wholly to be disapproved; both because there is no adaptedness in such a mark to such a purpose, and because it thus becomes impossible to accentuate a vowel at all. Continental usage is divided between the *macron* and the circumflex accent: thus, *ā* or *â*. The choice between these two is comparatively indifferent; yet the former (*ā*) must be allowed to be on the whole preferable, for the reasons that the *macron* was devised for this particular purpose and has no other, and that it is more easily combined with the accent-marks (a consideration of prime importance): there is, in fact, a degree of incongruity in writing two accent-marks, a circumflex and an acute or grave, over the same letter. Grassmann's device, of using the *macron* for simple long and the circumflex for long acute, is ingenious, and obviates a certain difficulty as regards type; but it is hardly worthy of general adoption, since it involves an inconsistency, and also leaves the case of a long circumflex (*svarita*) unprovided for. For these reasons, after employing the circumflex-sign for thirty years, I have myself recently adopted the *macron* instead.

The question of representation of the *r*-vowel is of quite another kind. Two signs divide between them general usage: namely, *r* and *ṛ* (and to the former of these Lepsius's sign, with little circle instead of dot beneath the *r*, may be regarded as practically equivalent, being theoretically preferable). Here the choice is not a matter of indifference, but involves an obviously important principle: not to give unnecessarily to a single element a double sign involving a false utterance. All

who understand Sanskrit phonetics know that the sound represented is a pure *r*-sound, and that *ri* is a later Hindu mispronunciation; there is no reason, theoretical or practical, why we should adopt and perpetuate the error. Simple *r*, with marks of quantity and of accent to be added as in the case of the other short vowel signs, is the only acceptable representative. It follows, of course, that *l*, and not *li*, and *d* *fortiori* not that monstrous absurdity *lri*, should be written for the *l*-vowel.

The representation of the diphthongs has its minor difficulties. For the *guna*-diphthongs, there is almost universal acceptance of the signs *e*, *o*, with the corresponding pronunciation; and this pronunciation has been so long the custom in India, and hence also without exception in Europe, that no scruple need be felt as to admitting the *e*- and *o*-signs. Yet the value of those diphthongs was so evidently *ai*, *au* at the beginning, and even in earliest Sanskrit, that we cannot help wishing it were possible to introduce the corresponding written forms—as indeed has been done, though without further imitation, by one or two French scholars, the usages of their own language favoring the substitution. The heavier diphthongs are written either *ai*, *au* or *āi*, *āu*: the latter are more etymologically correct, but the former are easier, and sufficiently well suited to *e*, *o*; there is not much to choose between them. To make evident the diphthongal quantity, *ē* and *ō* are written by some: it is well enough, yet seems a needless trouble; Grassmann's *ē*, *ō* for the heavier diphthongs has found no imitation, and is not to be commended.

The designation of the acute (*udātta*) accent by our ordinary acute mark is universal; and nearly or quite so is likewise that of the circumflex (*svarita*) by our so-called grave accent (thus, *yā*). No more suitable sign than the latter could be devised, since the tone signified by it is in fact a downward slide forward.

Passing now to the consonants, the first question concerns the mode of writing the aspirate mutes. And here, the addition of an *h* to the non-aspirate is well-nigh universal; Bopp's added reversed apostrophe—as *f'* etc.—is hardly any longer in use. In this there is nothing to be regretted; the element by which the aspirate differs from the non-aspirate may be sufficiently well signified by *h*, nor does the distinction of surd and sordant in regard to it need to be insisted on. As to the mute-classes, the marking of the linguals (or by whatever other name we may call the *mārdhanya*-class) with a dot beneath—thus, *ṭ*, *ḍ*—is also nearly without exception, and unobjectionable. But the treatment of the palatals is a harder question, and embarrassed moreover by the doubt concerning the precise phonetic value of the sounds at a given period. To me, *c* and *j* (with, of course, *ch* and *jh* as aspirates) seem on the whole to be preferred: accented gutturals (as *k'*, *g'*) are more burdensome, and also interfere with the clearness of the actual accent; nor should, on theoretical grounds, any diacritical mark be employed with so diverse values. This last reason is conclusive also against the common English use of *ch* and *chh*—in which, moreover, is involved a needless waste of time and labor.

Of the nasals, *n* and *m* pass without question; and *ṇ*, for the lingual, goes by constraint of analogy with *ṭ*, *ḍ*; as regards the two others, considerations of convenience must determine. One of them will naturally be written *ñ*, because that sign is widely found already provided in fonts of type; and, in accordance with its general value, this is best assigned to the palatal nasal. For the remaining guttural is oftener met with an *n* with short horizontal line above it—which line ought, by its length or otherwise, to be well distinguished from the *macron*.

In connection with the nasals may be considered the representation of the *anuvāra*, difficult both on account of the variety of methods employed, and because, with the Hindu phonetists as well as with their modern successors, there has been question as to the phonetic value of the sound: whether and how far it was a nasalization of the vowel, or a nasal element following the vowel. Since, however, the Hindu texts in general use the same sign for all the different classes of cases, and whatever their theoretic estimate of the sound, there appears to be no good reason why we should not do the same thing with the same unanimity: writing, for example, *hāṇsa*, and allowing its *ṇ* to be viewed as having either the one character or the other. For it would be as good as impossible to provide a

complete set of vowel-signs, unaccented and accented, with a mark of nasality added. Whether *n* or *m* shall be used as basis, and what and where the diacritical mark applied, must be mainly a matter of arbitrary selection: I prefer a dot above rather than below, because the dot below is already in full use as lingual mark, and because the dot above seems like a reproduction of the corresponding *devanāgarī* sign; and further, the adoption of the latter allows us to write *ñ* for a more independent *anusvāra*, and *ṁ* for an *m* assimilated to a following consonant—a distinction which has a high practical convenience.

Of the semivowels, only the palatal and labial call for discussion. For the latter of these, too, *v* is so generally current as representative that it may almost pass for universal; a few Germans use *w* instead, but for no good and defensible reason. Historically best, to be sure, would be a *w* in the English sense and having the English utterance. Yet the English sound is also originally represented by *v*; and as we write both Latin *vinum* and French *vin*, recognizing the *w*-sound as belonging to the earlier word and the *v*-sound to the later, we may properly enough do the same in the Sanskrit. For the palatal semivowel are widely used both *y* and *j*. The latter has much in its favor, being in all respects related to *i* as *v* to *u*; and it is to the Germans the natural sign for the sound, as is *y* to the English and French. The choice of designation has to be made in connection with that for the sonant palatal mute; and there is, it may fairly be claimed, a gain of convenience and economy in adopting for the two sounds *j* and *y*, rather than in taking *g'* and *j*, and so leaving *y* out of use altogether.

Among the sibilants we have only one fixed point, the dental *s*; in regard to the other two usage is very fluctuating, and the prevailing practice not altogether to be approved. It was apparently by some mishap that at the outset *sh* came to be used by the English for the lingual instead of the palatal sibilant, the two being regarded as practically undistinguished in utterance (for the definition of the lingual as like *sh* in *shun*, and the palatal as like *ss* in *session*, though servilely copied from one grammar to another down to the latest, really means this, since the sounds in the two words are precisely the same); the impression was thus given that the lingual was the normal *sh*-sound, and the error has been perpetuated in a great variety of ways. There is one wholly unobjectionable mode of correcting it: namely, by letting the lingual point below the letter do for the sibilant what it does for the mutes and nasal, and so writing *ṣ*. This Grassmann (as perhaps some before him) has done, and others are doing—myself, for example, after reluctantly writing *sh* for a generation. The sign *sh*, or anything else involving the same implication, should be banished from general use. For the palatal sibilant, the customary English sign *s'* is very bad, as again using an accent-mark to signify what is not accented, and embarrassing the designation of the real accent. On the continent is most widely employed the sign *ç*, which answers the purpose quite sufficiently well, although nothing very positive is to be said in its favor save that it includes a palatal letter as basis, and is found provided and ready for use in many fonts. In an alphabet of wider bearing, whatever sign stands for the *sh*-sound would be the most suitable representative of this sibilant.*

Bopp's addition of a diacritical point to our *h* as sign of the Sanskrit aspiration has, so far as observed, found no imitators, and is not to be commended. The character *h* for *visarga* is too firmly rooted in general usage to be displaced; nor is there pressing need for seeking a better representative for the sound.

To sum up briefly: the items to be most strongly urged, as involving important principles, are the use of *r* and *ṣ* for the lingual vowel and the lingual sibilant respectively; of next consequence, for the sake of uniformity, is the adoption of the signs *c*, *j*, *y*, *ç* for the palatal sounds; the designations of long vowels, of the diphthongs, of the nasals, are minor matters, which will doubtless settle themselves by degrees in the right manner.

A remark or two may be added as to the division of words. As every one knows, there is in the manuscripts no division at all; the whole text is written solid, and prose and verse alike. The European rule is, to make in *devanāgarī* writing or printing a separation between words, whenever it can be done without

* A recent isolated case of the introduction of *ç* as sign of the palatal sibilant is against every analogy, and altogether to be condemned.

any alteration of the written form; and it is so reasonable, and so universally practiced, that no suggestion of a change appears called for. In transliterated text, now, the natural adaptation of this rule would evidently be, to separate wherever the transliterated form suffers no alteration: thus, for example, *tāt savitūr vārenyam*. To write *tātsavitūrvārenyam* because in *devanāgarī* the words would have to be so connected is certainly the height of impractical bad logic—not to say of pedantry. The Boppian method of dividing also words whose final and initial vowels are fused into one sound, putting a single or double apostrophe before the second word, will naturally be followed only where the convenience of earliest beginners has to be consulted; but too anxiously to avoid it there seems to me to savor of the pedantic. Certainly, its application in transliterated texts (e. g. *tathāi 'vā 'nī*) is not only unobjectionable, but to be recommended; and it is even as good as imperative where the authoritative form of a word (as determined, for example, by a *pada*-text or by a commentary) is to be briefly signified.

15. Notes on certain analogous Structures and Constructions in Tibetan and Japanese, by Mr. Rockhill; presented by the Corresponding Secretary.

Mr. Rockhill briefly reviews the analogies between the two languages in question with regard to the verb, the noun-forms in construction, the formation of abstracts and diminutives, the uses of adjectives and numerals, of pronouns and adverbs, the value of reduplications, and so on.

One or two other communications were for lack of time withdrawn, to be presented at the next meeting.

A vote of thanks to the authorities of Columbia College, for the hospitable reception and entertainment offered by them, was passed, and the Society adjourned, to meet again in Boston on Wednesday, May 25th, 1881.

Proceedings at Boston, May 18th, 1881.

THE Society assembled at the usual place and time. The President and all the Vice-Presidents being absent, the chair was taken by Prof. A. P. Peabody, of Cambridge, and later by Rev. W. H. Ward, of New York.

The Treasurer's report for the last year was read, and his accounts audited by a committee appointed for the purpose, and accepted. The summary of accounts is as follows:

RECEIPTS.

| | | | | |
|--------------------------------------|---|---|---|-------------------|
| Balance on hand, May 19th, 1880, | - | - | - | \$674.06 |
| Annual assessments paid in, | - | - | - | \$570.00 |
| Sale of the Journal, | - | - | - | 194.22 |
| Interest on deposit in Savings Bank, | - | - | - | 27.57 |
| Total receipts of the year, | - | - | - | 791.79 |
| | | | | <u>\$1,465.85</u> |

EXPENDITURES.

| | | | | |
|-----------------------------------------|---|---|---|-------------------|
| Printing of Proceedings and Journal, | - | - | - | \$753.25 |
| Expenses of Library and Correspondence, | - | - | - | 26.15 |
| Total expenditures of the year, | - | - | - | \$779.40 |
| Balance on hand, May 18th, 1881, | - | - | - | 686.45 |
| | | | | <u>\$1,465.85</u> |

Bills for printing will soon be due which will nearly or quite exhaust the balance now in the Treasury.

The amount of the Bradley type-fund is at present \$848.52.

The report of the Librarian showed the accessions to the Library during the year to consist of forty-six volumes, sixty-three parts of volumes, forty-three pamphlets, and four manuscripts: the number of titles of printed books being now 4,046; of manuscripts, 148. Among the gifts is a magnificent work, published at the expense of the Government of the Netherlands, and by it presented to the Society, on the Buddhist temple of Bôrô-Boudour in the island of Java, consisting of 418 royal folio plates and a descriptive text in Dutch and French.

The Committee of Publication reported that the twelfth volume of the Journal, containing the Index Verborum to the Atharva-Veda, ordered published last year, was on the point of completion, and would be distributed to members doubtless within a month; also, that progress had been made with the earlier-

begun eleventh volume, of which the first part might be expected to be finished in the course of the year.

The Directors gave notice that they had appointed the autumn meeting of this year to be held in New Haven, on the last Wednesday (26th) of October. Also, that they had continued the Committee of Publication of last year for another year. Further, they recommended to the Society the election as Corporate Members of the following persons :

Prof. Maurice Bloomfield, of Baltimore, Md. ;
Rev. F. F. Ellinwood, of New York ;
Mr. E. W. Hopkins, of Bridgewater, Mass. ;
Rev. L. F. Mills, of Hanover, Germany.

The gentlemen thus proposed were then balloted for, and declared duly elected.

The election of officers for the ensuing year being next in order, a letter was read from Prof. Salisbury, of New Haven, positively declining to be a candidate for re-election as President. Prof. Abbot, of Cambridge, also requested to be relieved, after nearly thirty years of service, of the duties of Recording Secretary. These communications were referred to a Nominating Committee, which brought in and proposed the following Board of Officers, and it was elected without dissent :

President—Prof. S. Wells Williams, LL.D., of New Haven.

Vice-Presidents—Messrs. Clark, Parker, and Woolsey (as last year).

Recording Secretary—Prof. C. H. Toy, D.D., LL.D., of Cambridge.

Corresponding and Classical Secretaries and Treasurer and Librarian, Messrs. Whitney, Goodwin, and Van Name (as last year).

Directors—Messrs. Cotheal, Short, and Ward, of New York, Peabody and Lanman, of Cambridge, and Thayer, of Andover (as last year), and Prof. Isaac H. Hall, Ph.D., of Philadelphia.

The presiding officer (Prof. Peabody) then communicated to the meeting the names of the members who had deceased during the preceding year : namely, of the Corporate Members—

Rev. Rufus Anderson, of Boston ;
Prof. J. L. Diman, of Providence, R. I. ;
Prof. W. C. Fowler, of Durham, Conn. ;
Prof. S. S. Haldeman, of Chickies, Pa. ;

and of the Corresponding member—

Rev. S. F. Brown, of Japan.

Prof. Peabody spoke at considerable length of the venerable Dr. Anderson, his own early teacher and life-long friend, describing and extolling his many virtues of character, his long years of devoted service to the cause of Christian missions, his warm interest, in connection with that cause, in studies relating to East-

ern language and history, and his contributions to them. The Corresponding Secretary called attention to the fact that he was the last survivor in the Society of its band of founders, having been a Director from the beginning and for many years a Vice-President, till age and infirmity led him to decline a re-election as such; and read extracts from the first records (1842), showing the active part taken by him in its earliest proceedings.

At the invitation of the chair, Prof. Williams of Brown University paid an eloquent tribute to the memory of his colleague Prof. Diman, dwelling upon the loss which American letters had sustained by the early death of this distinguished scholar and teacher.

The Corresponding Secretary recounted the services of Prof. Fowler to the study of American history and of the English language; and he gave a brief sketch of the life and works of Prof. Haldeman, who, from being a student of natural science, had passed to the study of phonetics, taking high rank by the production of his Trevelyan Prize Essay (1860), and during the latter part of his life had devoted himself mainly to philology, publishing many works, and being especially active in connection with the American Philological Association.

Dr. Ward gave some account of the long and efficient missionary labors of Dr. Brown, continued, with intermissions, for nearly forty years, in China and Japan.

Extracts from the correspondence of the past half-year were read by the Corresponding Secretary.

Mr. R. A. Guild, Librarian of Brown University, of Providence, R. I., communicates the information that the University has lately received from Burma a complete copy of the Buddhist sacred books, in Pāli. The donor, Rev. J. N. Cushing, writes respecting them:

"The set of books belonging to the Betagat (*Tripitaka*) is complete, as the Burmans accept them. Doubtless the text is imperfect, for there are always more or less errors in every palm-leaf book copied. All that I can say is that the books are such as any priest teaching Pāli, in his Kyoung, would use. . . . Those having the bright gilding and vermilion covers come from Mandalay, where the art of palm-leaf book-making flourishes in its greatest perfection. These are new books. Some of the others have long been used in monasteries." . . .

Prof. Isaac H. Hall writes from Philadelphia, in reference to the Greek Inscription from Beirût, communicated to the last meeting (see *Proceedings* for Oct. 1880, above, p. xli.), that the emendations then conjecturally made in it prove, on renewed examination of the original by a friend on the spot, to be the true readings of the monument itself.

Dr. S. Merrill, of Andover, called the Society's attention to the fact that the inscription in question had already been published, in Boeckh's *Corpus*, vol. iii., and also in the *Bibliotheca Sacra*, vol. v., p. 588.

Prof. Hall also sends a brief account, with transcription and translation, of a charm picked up, a year or two ago, by an American gentleman in Jerusalem, near the pool of Siloam. It was enclosed in a tightly sealed little tin box.

"The paper contains one short titular line, and six other lines, written in a Hebrew character that is rather difficult to read, but which would be called Rabbinic; but about two thirds of the last line are composed of Arabic numerals, carelessly written. Beneath is a square of sixteen spaces, with Arabic numerals in all the spaces, and an Arabic name written outside of each of the four sides. The language is a Chaldaised Hebrew, with at least one Arabic peculiarity, the use of the article. The following is the translation:

" 'May the work of Satan prosper!

" 'I conjure you, ye the evil spirits of the evil spirits of Asmodai the King of the evil spirits and Rex Tartaroth, king, and Meimôn and Zuba'h and Burkân and Mûrhab and Shemhôresh, and the red king and the white king, that ye shall put into the heart of Mehmed the son of 'Eliya fire and brimstone of mighty love, flame of Jah, that he may neither eat nor drink until he shall have done instantly the wish and will of Karmuz the son of Sûgma, so that he may fulfil his request, and not delay in the least nor bring to naught, through the force of those names that are set over the moon, Liakim, Liakî', Liakîr, Liâlgô, Liârôth, Liârôsh [each name twice], and in the Name, and the sons of Korah, Assir and Elkanah and Abiasaph and Elde'a."

"The numbers of the last line, when turned into Hebrew characters by their numerical values, seem to make no continuous sense. The numbers in the square, similarly treated, signify 'Love, mighty fire, flame mighty,' the words about it are the names Gabriel, Michael, 'Ursael, Asrafel."

Rev. L. F. Mills, now residing at Hanover, in Germany, writes under date of March 6, 1881, giving an account of his labors on the Avestan Gâthâs, and of the publication of their results in which he is now engaged, and enclosing a few specimen pages of the latter.

Mr. Mills's edition includes the Avestan text, with transliteration and verbatim and free translations (the former in Latin); the transliterated Pahlavi version with critical notes and translation; Neriosengh's Sanskrit version in transliteration and translation; and the (transliterated) Persian Pahlavi described below. The Pahlavi version of the Gâthâs, as of the rest of the Yagna, has hitherto rested on a single MS., published by Spiegel; Mr. Mills is placed, by the kindness of Dr. F. W. West, in possession of the collation of another MS. of about the same age, lent him by Destur Hoshangji Jamsajji in India; and also had the loan from the Munich Library of a copy made for Haug just before leaving India from a Pahlavi text in Persian characters, with interlinear Persian translation (mixed with Parsi and Arabic). It is not known from what source this latter text comes; in the difficult task of its decipherment Mr. Mills has again had assistance from Dr. West. It was found a valuable umpire between the other two texts, but so far independent that its own publication was deemed also desirable. The translation of the Pahlavi founded on these authorities has been revised by West, and in part by Spiegel; the former's suggested alterations, where not accepted and incorporated by Mr. Mills, the latter intends also to publish in full. For Neriosengh's Sanskrit, Mr. Mills has received from Spiegel notes of a collation of another Copenhagen MS.; and the same scholar has revised his work. An elaborate commentary is to follow, in which will be reported the opinions on every point of the author's predecessors, both Asiatic and European (except Auquetil); and there will be added glossaries of Pahlavi, Sanskrit, and Persian words, and a complete Index Verborum to the Gâthâs themselves, with references to the explanations of each word. It is hoped that the volume will appear in little more than six months.

Mr. Mills's letter gives a succinct review of the condition of the Avestan field at the present moment, showing the timeliness of his undertaking. He was first drawn toward it by a desire to examine the connection between Zoroastrianism and orthodox Pharisaism. He has the approbation and counsel and aid of the leading scholars of Europe in this department, and hopes to gain the sympathy and support of Americans also.

Communications were now presented, as follows :

1. Remarks on Guyard's theory of Semitic Internal Plurals, by Prof. C. H. Toy, of Cambridge.

The Semitic broken or internal plurals have commonly been regarded as collectives (the language treats them as singular feminines), in which the numerical extension is indicated by an inward extension of form, as it is in the external plural by an addition at the end. There are difficulties in this view, one of which is that some of the broken plurals show also additions at the end, and Derenbourg (*Journal Asiatique*, June 1867) held the form in *an* to be a real external plural.

A few years later (1870), M. Stanislas Guyard extended this suggestion of Derenbourg's so as to include all the broken plurals, which he endeavors to show are nothing but remnants, more or less disguised, of the regular external plural, somewhat as from English *man* we have *men* for *men-er*. He makes the following classes: 1. forms showing the regular plural ending, with or without nunation or unimation—as *an*, which is dual-ending in Arabic, and plural in Ethiopic and Aramaic, *ay*, plural in Aramaic, and *i*, plural in Hebrew (as, *debāri-m*); 2. such as have lost the termination, but preserve the internal vowel-modification consequent on the addition at the end—as *kitāl* (from which *aktāl* by prosthetic Elif), for *kitāli*; 3. those which show the sequence *a-ā-i*, occurring in plurals like *arādī*, and thence extended by analogy to all quadrilaterals and to other forms; and the sequence *u-ū*, imitated from biliteral plurals such as *sunūna* from *sanat*; 4. those which have substituted for the plural termination the feminine ending *t*. All other forms called in the grammars internal plurals he regards as true collectives, and not plurals.

This explanation is in many respects an attractive one. It accounts for a part of the facts in a satisfactory manner; it gets rid of an apparent anomaly in South Semitic inflection; and it is in accordance with what we know of the prevailing genesis of the plural (by addition at the end) in all families of languages. In its turn, however, it presents serious difficulties.

It supposes that Arabic and the other Southern dialects have a double plural system, retaining the full Semitic form as a living inflection, and alongside of it the same plural in curtailed shape, and also living, except that its plural character has been forgotten and it is treated as a feminine singular. This seems to be highly improbable. Modern Arabic has not stood still in the path of phonetic degradation; it has dropt the nominative, using the old genitive *ina* for all cases; and further, has largely given up the external in favor of the broken plural. But it keeps the two classes distinctly apart. This theory supposes that long ago the language had not only already gone further in the same direction of phonetic change, but, after having produced a curtailed plural, had lost consciousness of its plural character and treated it as a singular. Such a transformation at such a time seems hardly credible.

Further, the theory involves a non-Arabic system of internal vowel-change. The plural *arādī* from *ard* M. Guyard compares with Hebrew *debārim* from *dābar* or *melakim* from *malk*, and sees in the two the same broadening of the pretonic vowel. This, however, is distinctively Hebrew, and not Arabic; the latter shows no such vowel-movement. A similar objection holds to the comparison of Arabic *nisā*, 'women,' with Hebrew construct *nesē* and Syriac *nesē*. It is the transference of the phonetic usages of one dialect to another, without historical grounds.

There is nothing in the vowel-systems of these plurals that demands such a theory or its explanation. All the forms occur as infinitives, or as adjectives and nouns. The fact that quinquilaterals in making the plural reject one letter in order to have just space for the vowel-sequence *a-ā-i*, on which M. Guyard is disposed to lay much stress, is not peculiar to the internal plural; a similar device is adopted in forming diminutives and relative adjectives in *ya*, in both cases from a dislike to five-lettered words; or, if the aim be to maintain a certain vowel-sequence, such sequence arises in the diminutive not through an external addition, but by a mere internal modification, and may so have arisen in the case of the plurals.

Lastly, this theory fails entirely to explain certain of the internal plurals (monosyllabic and dissyllabic trilaterals), and these M. Guyard throws out of the category of plurals, and regards as singular collectives. The language, however, makes no distinction between them and the others, and so arbitrary a separation

of the forms is unjustifiable, especially as collectives proper are in Arabic carefully distinguished from those plurals.

In spite, therefore, of the attractive simplicity of this explanation, and the ingenuity and learning with which it is presented by its author, it seems to labor under difficulties which, if not fatal, at least make it impossible for us to accept it till new light has been thrown on the facts.

2. On Darmesteter's Translation of the Vendidad, by Prof. J. Luquiens, of Boston.

Prof. Luquiens presented a review of this work of Darmesteter's, which constitutes the fourth volume of Müller's series of Sacred Books of the East. His paper ended with the following conclusions: Considered from a literary point of view, the work leaves little or nothing to desire; it is a bright and spirited rendering of a book which was not held to be either bright or spirited. If the chief aim of M. Darmesteter was to bring out in the strongest light the best sense to be elicited from the tradition, he has been eminently successful; this result, however, seems an honor paid to the native commentators at the cost of a strict adherence to the text and to the most progressive methods of exegesis. As far as the coloring and subinterpretation of the Vendidad by the naturalistic myth are concerned, one must regret the hastiness, and yet admire the faith, which led him to thus irrevocably identify the fate of his work with that of theories not yet risen from the hypothetical stage.

3. On the Metres of the Rig-Veda, by Mr. W. Haskell, of New Haven; presented by the Corresponding Secretary.

The object of Dr. Haskell's paper is to make a statistical exhibition of the fundamental facts of Rig-Veda metric, as a necessary basis for future more detailed examination of the subject, having especially in view these three points: 1. what are the actual metres used, as opposed to those artificially distinguished and named by the Hindu commentators; 2. what is their comparative frequency; 3. what is the general metrical usage or law of each, as determined by an enumeration of quantities in a number of specimen verses.

The metres are arranged on a (provisional) theory as to their historical relations, as follows: that the *anustubh* pāda, of eight syllables, is the most primitive, and the *anustubh* metre, of four such equal pādas, its normal form of occurrence. *gāyatri* and *pankti* etc. being the variations of this; that the 8-syllabled pāda is extended to one of twelve syllables more or less regularly alternating with the former, in the *brhatt* and other kindred metres; that the *jagati* is then made by putting together four 12-syllabled pādas; that the *tristubh* pāda, of eleven syllables, is a shortened *jagati*; and that the 5-syllabled pāda, of the *dripada* *biraj*, is a syncopated *tristubh*. There are not, either in the Rig-Veda or in the Atharva-Veda, any other metrical elements than these; all other so-called metres are various combinations of these elements, or imperfect and irregular verses, of varying degrees of irregularity, rising sometimes even to entire absence of traceable metrical form.

The order of the metres in respect to frequency is a very different one from this. Here (omitting the minor variations and doubtful cases) the *tristubh*, of four 11-syllabled pādas, comes first, reckoning about 4200 verses, or over two fifths of the whole Rig-Veda: the *gāyatri*, of three 8-syllabled pādas, stands next, with near 2450 verses (occurring especially in the 1st, 8th, and 9th Books); then the *jagati*, with near 1300 verses: the *brhatt*, *satobhritt*, *usnih*, and other combinations of 8-syllabled and 12-syllabled pādas (especially in the 8th Book), near 1200 verses; the *anustubh*, over 800 verses; the *pankti* etc., of more than four 8-syllabled pādas, about 250 verses.

An enumeration of the heavy and light syllables, now, in fifty *anustubh*-verses (with omission, here as later, of a few syllables of doubtful value) gives the following results:

| | syllables. | i. | ii. | iii. | iv. | v. | vi. | vii. | viii. |
|-----------|------------|-----|-----|------|-----|-----|-----|------|-------|
| | light | 87 | 33 | 52 | 31 | 186 | 8 | 189 | 104 |
| Anustubh: | heavy | 108 | 163 | 144 | 164 | 9 | 187 | 7 | 92 |

The pāda of this type, accordingly, is one having a very marked iambic movement in its last half (the final syllable being, as in Greek and Latin, indifferent), and a very weak iambic movement, consisting only in the greater preponderance of heavy syllables in the second and fourth places, in its former half. The different pādas show no difference of structure that is worthy of remark—unless it be that at the end of the first and third pādas the heavies are more frequent (namely, 54) than at the end of the second and fourth (only 38). The marked excess of heavy syllables throughout the whole former half of the pāda is, as will be seen below, a feature shared by the 8-syllabled pādas of all the other metres. The preponderance of lights in the concluding syllable of the pāda belongs to all the metres without exception, and appears to indicate only the real indifference of that syllable, the greater natural frequency of light syllables showing itself there without hindrance.

A similar enumeration for the other common pādas of eight syllables—namely, the *gāyatrī*, *pankti* (pādas *a-d*), *uṣṇih* (pādas *a, b*), *brhatī* (pādas *a, b, d*), and *satobṛhatī* (pādas *b, d*)—is as follows:

| | syllables, | i. | ii. | iii. | iv. | v. | vi. | vii. | viii. |
|-------------|------------|-----|-----|------|-----|-----|-----|------|-------|
| Gāyatrī: | light | 64 | 38 | 42 | 34 | 135 | 17 | 128 | 96 |
| | heavy | 85 | 109 | 105 | 110 | 14 | 130 | 21 | 54 |
| Pankti: | light | 85 | 61 | 62 | 44 | 179 | 12 | 190 | 138 |
| | heavy | 113 | 138 | 137 | 155 | 20 | 187 | 9 | 65 |
| Uṣṇih: | light | 43 | 20 | 29 | 18 | 89 | 10 | 97 | 63 |
| | heavy | 55 | 77 | 70 | 80 | 10 | 89 | 2 | 36 |
| Brhatī: | light | 64 | 41 | 36 | 49 | 146 | 6 | 150 | 98 |
| | heavy | 86 | 109 | 114 | 101 | 4 | 144 | 0 | 52 |
| Satobṛhatī: | light | 42 | 14 | 42 | 17 | 92 | 9 | 96 | 62 |
| | heavy | 55 | 83 | 55 | 80 | 5 | 87 | 1 | 35 |

There seem to be no noteworthy differences of structure in these varieties of the 8-syllabled pāda: only the *gāyatrī* shows a larger number of exceptional quantities than the others in its latter half. This is in accordance with the general greater irregularity of the *gāyatrī*, rising even to a tolerably well-pronounced trochaic movement and cadence in certain hymns or parts of hymns; such have been avoided in the enumeration here made.

The total number of light and heavy syllables in the enumerated pādas of the six metres is given below, along with a reduction to percentages, and statement of the limits within which the percentages vary (as between the different metres, as above reported):

| | syllables, | i. | ii. | iii. | iv. | v. | vi. | vii. | viii. |
|-----------|------------|-----------|-----------|----------|-----------|----------|----------|-----------|-----------|
| | light | 385 | 207 | 263 | 193 | 827 | 62 | 850 | 561 |
| | heavy | 502 | 679 | 625 | 690 | 62 | 824 | 40 | 334 |
| per cent. | light | | | | | 93.0 | | 95.5 | 62.7 |
| | heavy | 56.6 | 76.6 | 70.4 | 78.1 | | 93.0 | | |
| limits | | 55.4-57.3 | 69.3-85.6 | 56.7-76. | 67.3-84.1 | 90.-97.3 | 88.6-99. | 85.9-100. | 53.1-65.3 |

Taking up, now, the pādas of twelve syllables, there is a noteworthy difference between the *uṣṇih* (8 + 8 + 12) on the one hand, and the *brhatī* (8 + 8 + 12 + 8) and *satobṛhatī* (12 + 8 + 12 + 8) on the other (these three constituting more than four fifths of the whole number of mixed eight and twelve-syllabled pādas, and the others being mainly extensions and variations of them). In the *uṣṇih*, the 12-syllabled pāda seems essentially an 8-syllabled one of the usual form, with four more syllables added at the end; as will appear from the following enumeration of a hundred pādas (half of them being those belonging to the 8-syllabled *uṣṇih* pādas already reported):

| syllables, | i. | ii. | iii. | iv. | v. | vi. | vii. | viii. | ix. | x. | xi. | xii. |
|------------|----|-----|------|-----|----|-----|------|-------|-----|----|-----|------|
| light | 49 | 16 | 38 | 13 | 75 | 42 | 76 | 16 | 94 | 2 | 95 | 68 |
| Uṣṇih: | | | | | | | | | | | | |
| heavy | 50 | 83 | 61 | 86 | 24 | 56 | 23 | 82 | 5 | 96 | 4 | 31 |

The iambic movement of the middle quaternion of syllables is sufficiently marked, although by no means so cogent as that of the second quaternion in *anuṣṭubh* and *gāyatrī* etc.; it is especially faint in the sixth syllable, where the heavy do not very greatly exceed in number the light quantities.

In *br̥hati* and *satob̥r̥hati*, the middle quaternion has a quite other character: its first three syllables are prevailingly light, and the second of them (which in *uṣṇih* was prevailingly heavy) is more uniformly light than either of the others, while the first is oftener heavy than the third. Thus:

| syllables, | i. | ii. | iii. | iv. | v. | vi. | vii. | viii. | ix. | x. | xi. | xii. |
|---------------|----|-----|------|-----|----|-----|------|-------|-----|----|-----|------|
| light | 49 | 15 | 45 | 12 | 57 | 91 | 62 | 10 | 97 | 1 | 99 | 61 |
| Br̥hati: | | | | | | | | | | | | |
| heavy | 51 | 85 | 55 | 88 | 43 | 8 | 38 | 90 | 3 | 99 | 1 | 39 |
| light | 38 | 15 | 34 | 13 | 57 | 76 | 66 | 5 | 89 | 5 | 95 | 70 |
| Satob̥r̥hati: | | | | | | | | | | | | |
| heavy | 58 | 81 | 62 | 82 | 39 | 17 | 31 | 92 | 8 | 91 | 2 | 27 |

This looks like an expansion of the ordinary 8-syllabled *pāda* by an inserted element, tending toward the form — ◡ — (more nearly, in actual fact, — ◡ — ◡ —).

The *jagatī* and *tristubh* *pādas* agree quite closely in their metrical structure with this. As they are in all respects accordant with one another, save that the *tristubh* is catalectic, their enumeration may be presented together, thus:

| syllables, | i. | ii. | iii. | iv. | v. | vi. | vii. | viii. | ix. | x. | xi. | xii. |
|------------|-----|-----|------|-----|-----|-----|------|-------|-----|-----|-----|------|
| light | 99 | 18 | 120 | 24 | 104 | 164 | 138 | 2 | 190 | 2 | 193 | 117 |
| Jagatī: | | | | | | | | | | | | |
| heavy | 95 | 175 | 74 | 170 | 89 | 23 | 56 | 192 | 4 | 191 | 1 | 77 |
| light | 115 | 26 | 105 | 24 | 116 | 166 | 100 | 5 | 186 | 4 | | 120 |
| Tristubh: | | | | | | | | | | | | |
| heavy | 82 | 172 | 92 | 171 | 80 | 27 | 97 | 192 | 11 | 193 | | 68 |

The metrical movement of the second and third quaternions of syllables here is in no important degree different from what it was in the two preceding metres. On the other hand, the iambic character of the first quaternion is rather more marked, the light quantities even predominating over the heavy in the first and third syllables. No great stress, however, is to be laid upon this: in almost any set of verses examined, the preponderance will be found to be on the one side and on the other in different *pādas*; in another set of about 65 *tristubh*-verses whose syllables were enumerated, the heavy quantities were found to be, in all the *pādas* together, slightly in excess of the light; and in the 50 *br̥hati* *pādas* belonging with the 8-syllabled *pādas* first reported, light syllables are in the majority in the first and third places.

The summary of quantities, then, with percentages and limits of variation, for the 12-syllabled *pādas* of *br̥hati* and *satob̥r̥hati*, the *jagatī* *pāda*, and the *tristubh* *pāda* (counting its eleventh syllable with the twelfth of the others), is as follows:

| syllables, | i. | ii. | iii. | iv. | v. | vi. | vii. | viii. | ix. | x. | xi. | xii. |
|-----------------|------|------|------|------|------|------|------|-------|------|------|------|------|
| light | 301 | 74 | 304 | 73 | 334 | 497 | 366 | 22 | 562 | 12 | 387 | 368 |
| heavy | 286 | 513 | 283 | 511 | 251 | 75 | 222 | 566 | 26 | 574 | 4 | 211 |
| light | 51.3 | | 51.8 | | 57.1 | 86.9 | 62.2 | | 95.6 | | 99.0 | 63.6 |
| per cent. heavy | | 87.4 | | 87.5 | | | | 96.3 | | 98.0 | | |
| limits, l. | 58.4 | 84.3 | 61.9 | 86.8 | 58.9 | 81.7 | 50.8 | 90.0 | 91.7 | 94.7 | 97.9 | 60.3 |
| h. | 50.2 | 90.7 | 64.6 | 88.0 | 59.4 | 91.9 | 71.1 | 99.0 | 98.0 | 99.0 | 99.9 | 72.2 |

For the *dvipadū virāj*, the thirty-one verses of i. 65-70 have been enumerated. The results are given for two successive *pādas*, because the uniform and decided prevalence of heavy syllables at the end of the first *pāda* of each pair (standing,

if the provisional theory stated above be correct, in the place of the fifth and sixth syllables of a *tristubh* appears to have a bearing of some importance on the view to be taken of the metre. Thus:

| | syllables, | i. | ii. | iii. | iv. | v. | vi. | vii. | viii. | ix. | x. |
|----------------|------------|------|------|------|------|------|------|------|-------|------|------|
| Dvipadā Virāj: | light | 53 | 5 | 93 | 4 | 21 | 65 | 7 | 103 | 6 | 65 |
| | heavy | 69 | 117 | 29 | 118 | 100 | 56 | 113 | 18 | 115 | 56 |
| per cent. | light | | | 76.2 | | | 53.7 | | 85.1 | | 53.7 |
| | heavy | 56.6 | 95.9 | | 96.7 | 82.6 | | 94.2 | | 95.0 | |

The usual caesura after the fifth syllable is wanting in the fourth double pāda of 68.1, and in the third of 70.5; and the same is the case in the first of vii. 34.17: a strong indication that the whole is essentially one pāda. The occasional occurrence of an unsynopated *tristubh* pāda among *dvipadā virāj* pādas also helps to illustrate the transition: e. g. vii. 34.7 (second half); and, where the one metre changes to the other, vii. 34.21 (second half); 56.10 (do.).

Any treatment of the other mixed metres, and of the irregular and defective verses, is reserved for a later communication.

Dr. Haskell acknowledged the constant counsel and assistance of Professor Whitney in classifying and presenting the facts gathered by him. The suggestion of the true character of the *dvipadā virāj* he owed to Professor Lanman.

4. On the Sāṅkhya Philosophy of the Hindus, by Prof. C. C. Everett, of Cambridge.

It was maintained in this essay that the Hindu systems of philosophy differ among themselves fundamentally in regard to the view taken of the principle of subjectivity; and that the difference in the accounts of the external world given by the various systems results from the difference in the conception of this principle. What may be called the Vedic system assumed the subjectivity of all knowledge and experience. Those early thinkers had discovered that man cannot get beyond himself. The world was to them a dream-world, and thus unreal. This view is implied in the Upanishads; it is distinctly affirmed, and analyzed into certain proximate elements, in the Vedānta; and by some later commentators is pushed to the logical extreme of an absolute solipsism. The Sāṅkhya system, on the other hand, affirmed the objective reality of the universe. It met the opposing view with the only reply that could be logically effective. It found an element of objectivity necessarily present in the very form of subjectivity insisted upon by the Vedānta. It admitted in effect, at least in a certain sense, the dream-like nature of the world, but maintained that the dream as such was real and objective.

To make clear this statement, we must examine the nature of the soul (*puruṣa*) according to the Sāṅkhya system. The soul was, to it, pure intelligence, without emotion or causality. This view of the soul has been regarded as meaningless and absurd by all western commentators who, so far as known to the essayist, have expressed any opinion upon the subject. But the idea of the soul must furnish the key to the whole system; and if this is not understood, the system cannot be understood. It is important then to ask how this view of the soul was reached. We find indications of the method used. The existence of the soul as distinct from the body is shown by the fact that I speak of "my body." "I" must then be something distinct from my body. If it is objected that we also speak of the body of a statue, the answer is that this is pure tautology, the statue and its body being one. This reasoning we may carry further. Just as we say "my body," so we can also say "my mind," "my thought," "my feeling." Mind and thought and feeling must then be as distinct from the "I" as the body is. This may be illustrated in another way. We can not only say "I know;" we can also say "I know that I know." We may thus have a *regressus* into the infinite. This *regressus* the Sāṅkhya philosophers had too much common sense to admit; and the "I" is posited as lying behind all consciousness. A similar *regressus* into the infinite is possible in the opposite direction. We can ask of any-

thing "What is its cause?" and again, in regard to the cause assigned, "What is the cause of it?" and so on forever. Here the common sense of the Sankhyans affirmed *prakṛiti*, which was simply and avowedly to give the resting place needed. We must especially recognize the fact that in the search for the "I," and in that for the first cause of objective being, the movement is in opposite directions; and further, we must observe that all which we leave behind us in seeking the first cause is one of its effects, and thus belongs to it. Whatever on the contrary we leave behind in seeking the ultimate *ego* is cast off from it, and thus is foreign to it. The subject flees from the object, and, as it flees, it flings off one covering after another, until it stands naked and alone. While these views are implied in the whole discussion of this subject in the Sankhyan literature, and especially in the Aphorisms of Kapila, they are perhaps most distinctly stated in the Aphorisms of Patanjali. Here, two counter hypotheses are suggested to account for consciousness. One, that the "mind" is directly self-conscious and thus needs no *ego* behind it; the other, that self-consciousness is produced by memory. The first suggestion is rejected because "attention to two objects does not take place simultaneously" (Patanjali, v. 19). The other is rejected because "it would require a cognition of the cognition": that is, it would involve a *regressus* into the infinite (ibid. v. 20).

It will thus be seen that a profound psychological analysis underlies the Sankhya system. The subject, when we come to the last analysis, is but a single point over against the whole world beside. We understand also how real objectivity was reached, a result that had baffled the Vedantin. The nature of the difference in the views of the outward world held by the two systems is also obvious. To the Vedantin, the illusion which forms the essence of the universe exists in and through the subject. It is the soul that is the basis and sphere of all. On the other hand, the soul, according to the Sankhya system, being the one inmost point of subjectivity, "Intellect," which fills the place held by illusion to the Vedantin, becomes wholly objective. It cannot have its basis and support in the soul. The necessity of finding a basis and substance for it elsewhere leads to the notion of *prakṛiti*, which is merely this substantial basis of "Intellect." So, in the one system, we have the series of "sheaths" wrapping the soul, sheaths of "Ignorance," growing more and more dense as they overlie one another; and, on the other, we have the same forms of existence produced in a series by "Intellect," "the great one," or by *prakṛiti*, that works through it.

We see also the hope of deliverance which this view of the soul was fitted to bring to these thinkers, burdened by the thought of the evils of existence. If the soul is a mere spectator, it can leave when the show grows wearisome. Or rather, if it has no organic relation with the objective world, it has only to become conscious of this fact, to know itself to be free. This "discrimination" (from which perhaps comes the name of the system) is all that is needed. Through it, the soul that fancied itself bound knows that it is free.

The essay discussed, along with the views here presented, the nature of the three "qualities" (*guṇa*), the relation of the system to religion, and other points connected with it.

5. On Relative Clauses in the Rig-Veda, by Prof. J. Avery, of Brunswick, Me.

Prof. Avery discussed in a statistical way the subject of relative clauses in the Rig-Veda, so far as concerns their position with reference to the corresponding antecedent clauses, and also the various modes of treating the antecedent word. All passages had been collected and classified containing derivatives of the relative root *ya*: excepting, however, *yad*, *yadi*, and *yathā* in clauses expressing condition or purpose; *yad* as a conjunction meaning 'that, since, so that, although'; and *yathā* in the sense of *iva*. The passages are very nearly 4,000.

I. The antecedent clause stands first more than 2,000 times, or 50.8 per cent. of the whole number of occurrences. The antecedent is fully expressed in its own clause alone near 1200 times (29.5 per cent.): e. g. *tēna . . . gatam rāthēna . . . yēna śiṣṭvād bhūthur dīṛṣe vāsu* (i. 47. 9), 'come with that chariot with which ye have constantly brought good things to the worshipper'; *apō devī'r ūpa hvaye yātra gā'vāḥ pibanti nah* (i. 23. 18), 'I invoke the heavenly waters, where our kine

drink.' The antecedent is expressed in its own clause, and it or a synonym is repeated in the relative clause, 60 times (1.5 per cent.): e. g. *imandan nū maruta stōmo ātra yān me narah crūtyam brāhma cakrā* (i. 165. 11), 'the praise hath pleased me here, O Maruts, what famous prayer ye have made for me, ye men.' The antecedent is expressed in the relative clause, and represented by a pronoun in its own clause, 51 times (1.3 per cent.): e. g. *tyūṣ té yé pū'ratarām āpaçyan . . . mūrtyāsaḥ* (i. 113. 11), 'gone are they, what mortals beheld her before.' The antecedent is found in the relative clause alone 69 times (1.7 per cent.): e. g. *āpa dahā' rātr yēbhis tūpobhīr ādaho jārūtham* (vii. 1. 7), 'burn away the grudgers with what heats thou didst burn the waster;' *nū ri jānāmi yād ive dām āsmi* (i. 164. 37), 'I do not understand quite what I am now.' The antecedent is not expressed in either clause, except by a pronoun or adverb, 670 times (16.8 per cent.): e. g. *ihi brātū yā u tūc cīkelat* (i. 35. 6), 'let there speak here whoever knows that;' *āganma yātra pratirānta āyuh* (i. 113. 16), 'we have gone where they lengthen out life.'

II. The relative clause stands first more than 1850 times, or 46.8 per cent. of the whole number of occurrences. The antecedent is fully expressed only in its own clause over 900 times (22.6 per cent.), by noun, pronoun, or adverb: e. g. *yō rāyō 'vānir mahān . . . tāmā indrāya gūyata* (i. 4. 10), 'who is a great stream of wealth, to that Indra sing ye;' *yātra grāvā cidati tātra gachataṁ* (i. 135. 7), 'where the pressing-stone is uttering its voice, thither go;' *yātrā hīm āsmi tān ava* (viii. 75. 15), 'on what side I am. them favor thou.' The antecedent is expressed in the relative clause, and it or a synonym is repeated in the antecedent clause, 56 times (1.4 per cent.): e. g. *yé te pānthāh . . . tēbhīr no adyā pāthibhīh sugēbhi rākeṣa* (i. 35. 11), 'what paths are thine, by those easy paths guard us this day.' The antecedent is more fully expressed in the relative clause, and represented in the antecedent clause by a pronoun or adverb, 276 times (6.9 per cent.): e. g. *yī ta atīh . . . tiyā no hinuḥ rātham* (vi. 45. 14), 'what help is thine, with that urge on our chariot;' *yō ha vām mādhuṇo dr̥tiḥ . . . bītaḥ pibatam* (viii. 5. 19), 'what wine-skin of mead is yours, thence drink ye.' The antecedent is expressed in the relative clause alone 109 times (2.7 per cent.): e. g. *yā indra ṛśmo maghavan te āsti ṛkṣā sākhibhyaḥ* (vii. 27. 2), 'what might, magnificent Indra, is thine, bestow on thy friends.' The antecedent is not expressed in either clause, save by a pronoun or adverb, 526 times (13.2 per cent.): e. g. *yō asmān ubhidī'saty ādharān gamayā tāmaḥ* (x. 152. 4), 'whoso attacketh us, send thou to lowest darkness;' *iyām vīṣṭīr yāta ababhū'ra . . . sō āngī veda* (x. 129. 7), 'whence this creation came into being here, he verily knoweth.'

III. As a third position, the relative clause stands within the antecedent clause 94 times (2.4 per cent.). The same variety of treatment of the antecedent appears here as under the two preceding heads. Examples are: *tānya sūdhrtīr īśavo yū'bhīr āsyati nṛcāksasah* (ii. 24. 8), 'his are successful arrows, with which he shoots, men-beholding [ones]'; etc.: *çātrum āpa bādhasva dūrām ugrō yāḥ çāmbaḥ puruḥṭa tēna* (x. 42. 7), 'drive far away the enemy, O much invoked one—what weapon (?) is terrible, with that one (i. e. with whatever weapon is terrible);' *muñçātām yān no āsti tanū'ṣu baddhām kṛtām ēno asmāt* (vi. 74. 3), 'put away what sin committed is bound to our bodies from us;' *nahī nū yā'd adhitvāsi' ndram kō vīryā' parāḥ* (i. 80. 15), 'for no one, surely, so far as we know, is beyond Indra in might.'

IV. Once more, by a process the reverse of that just noticed, the relative clause takes the antecedent one wholly into itself. This singular arrangement occurs only twice, namely: *yā gñītha indra tīm sū no dā mado rṣṣan* (vi. 33. 1), 'what is the mightiest, Indra, do grant that to us, passion, O hero;' *yā ēka it tīm u stuḥ kṛstīnī'm vīcarsaṇīḥ pātīr fajñé* (vi. 45. 16), 'who verily alone, him praise thou, is born the chief lord of men.'

The natural position of the relative word seems to us to be at the head of its clause: and it is in truth found there in the Rig-Veda about 2600 times (65 per cent.); but it has the second place near 1,000 times (24.4 per cent.), the third place over 250 times (6.5 per cent.), the fourth place 81 times (2 per cent.), and so on, in decreasing frequency, down to the ninth place.

The preparation of this paper was suggested by certain brief statements made by Prof. Delbrück in his work on the Use of the Subjunctive and Optative in

Latin and Greek. He there says, in substance, that while the nature of the relative is such that the clause which it introduces should follow the principal clause, it in fact precedes it in most cases in Sanskrit—meaning, apparently, the Veda; or at least including the Veda, since that is the principal source of the examples quoted throughout his volume. In this usage, he declares, which is of secondary growth, the Sanskrit differs from the Greek of Homer. Now if my statistics are correct, it appears that in the Rig-Veda, at least, the relative clause retains its primitive position in a (small) majority of cases. He further states that the two forms of sentence, where the relative clause either precedes or follows the antecedent clause and the antecedent word is expressed in its own clause only, are not very frequent. On the contrary, if we include in these forms the instances where a personal pronoun serves as antecedent, they are half the whole number of occurrences. Again, we are told that the cases where the antecedent or a synonym is repeated in the relative clause are common. I find them uncommon, being less than 3 per cent. of the whole number. Yet further, it is maintained that by far the most frequent arrangement is that in which the antecedent word appears in the relative clause only; that when the latter follows the principal clause, there is no reference in that clause to the antecedent; and that, when it precedes the principal clause, the antecedent is generally represented in the latter by a form of the demonstrative *ta*. The last only of these three statements seems to be correct, so far as the Rig-Veda is concerned. It would appear that the author's views rested upon general impressions derived from reading, rather than upon any enumeration of instances.

6. Studies on the Mahāyāna or Great Vehicle School of Buddhism, by Mr. Wm. W. Rockhill, of Baltimore, Md.

The object of Mr. Rockhill's paper was to set forth some of the principal features of the doctrines of the Mahāyāna school from hitherto unpublished Tibetan documents, and also to show the differences that exist between the older *mahāyāna* sūtras, of which the Sūtra in 42 Chapters (see Proceedings for Oct. 1880, above, p. 1.) is an example, and those of later dates. The following is a brief abstract.

The oldest form in which we find the sūtras of the Great Vehicle is furnished by the Sūtra in 42 Chapters, in which the different points considered are set forth in unpretending, plain language, without any of the repetitions or embellishments of more recent works. The doctrine that is taught does not differ to any great extent from that of primitive Buddhism.

The sūtras on transcendental science (*prajñā pāramitā* sūtras) expose the more perfected form of teaching of the Mahayanists of the Madhyamika school. The object of all these works is thus defined by Eug. Burnouf (Intr. à l'hist. bud. ind., p. 483): "Les livres de la prajñā pāramitā sont consacrés à l'exposition d'une doctrine dont le but est d'établir que l'objet à connaître ou la perfection de la sagesse n'a pas plus d'existence réelle que le sujet qui doit connaître ou le Bodhisattva, ni que le sujet qui connaît ou le Bouddha."

The *Vajracchedika* (*Rdo-rje gchod pa*) is a good sample of these works. It is quite short (18 folios in the Tibetan text), and may consequently be considered as older than the similar works in 100,000 and 8,000 ślokas. This text differs in many respects from the Chinese, an English translation of which was given in 1864 by Mr. S. Beal (Jour. Roy. As. Soc'y, new series, vol. i.). The "Histoire de la vie et des voyages de Hiouen Tsang," p. 310, gives some of the objections to Kumārajīva's Chinese version (the one followed by Mr. Beal). The Tibetan text approaches much nearer the Sanskrit original, of which a copy exists in the Bibliothèque Nationale (fonds Burnouf, No. 34).

The founder of the Madhyamika school is said to be Nāgārjuna (or Nāgasona); but from different passages of Tāranātha and of the work of the biographers of Hiouen Tsang (p. 274), "Kumārajīva was a contemporary of Aśvaghoṣa, Deva, and Nāgārjuna," etc., we conclude that he was the great representative of his school before it assumed its definite form. According to the above statements, he must have lived towards the end of the IVth and commencement of the Vth centuries A. D.

The *Kāyatraya* sūtra, which belongs probably to the Yogācārya sect of the Mahāyāna school, is a short text taken from vol. xxii., *mādo* section (fol. 81a-b),

of the *Bksh-hgyur*. It teaches that all Buddhas are endowed with three bodies, the *dharmakāya* 'the body of the Law,' the *sambhogakāya* 'the body of perfect acquirement,' and the *nirmāṇakāya* 'the body incarnate.' When they have finished their ministry in this world, they divest themselves of the *nirmāṇakāya*, but retain in the *Parinirvāṇa* the two other purer forms, of which they have become possessed on account of their omniscience and many perfections. This text differs considerably from the one mentioned in Julien's *Si-yu-ki* (liv. iv., p. 240, note).

The third and last sūtra, the *aparimita āyurjñāna sūtra*, seems to be of very recent origin. The text that has here been used was published by the Baron Schilling von Cannstadt. The Buddha does not instruct Kumārabhūta Manjuśrī on any point of the doctrine. He simply tells him that, if the present work is copied, recited, or even kept in the house, it will greatly prolong life. The sūtra or sermon has here become a magical formula, the simple repetition of which is all that is necessary to salvation.

The *aparimita āyurjñāna hṛdayanū dhāraṇī*, the sequel to this sūtra, professes to contain in a charm of a few words all the virtue and power of the sūtra itself.

The *tantrika* school, to which the last sūtra belongs, was introduced into Tibet in the XIth century, and has been predominant there since that time.

7. On Lepsius's Views of African Languages, by Prof. W. D. Whitney, of New Haven.

Prof. Lepsius has recently (1880) published a Nubian Grammar, the fruit of studies begun during his celebrated expedition to Egypt and Ethiopia, in 1842-6, and afterward continued under favorable circumstances in Germany. It is worked out with the thoroughness, and in the clear and attractive style, which are characteristic of its author. Besides the grammar itself (200 pages), there is a body of Nubian texts (60 pages), a Nubian-German and German-Nubian vocabulary (180 pages), and an appendix (60 pages) on the dialects of the language, including also a criticism of Reinisch's work on the Nubian. To the whole is prefixed an Introduction (126 pages), on the classification and relationships of African languages in general; this will interest, of course, a wider circle than the rest of the volume, and is worthy of the most careful attention.

Lepsius believes all the African races proper to exhibit only a single physical type; and in addition to its ordinarily recognized characteristics he calls attention to a forward tilt of the pelvis, which gives a peculiar bearing to the body. But he regards the northern and northeastern peoples, the so-called Hamitic races, as early intruders from Asia, followed later by the Semites, these two divisions being ultimately related with one another. The whole southern peninsula of the continent, now, from 7° or 8° N. L. nearly to the Cape, being filled (with the insignificant exception of the Hotentot and Bushman) with the dialects of a single well-defined family, the South-African or Bantu, and there being between these and the Hamitic a broad band of heterogeneous tongues, falling into numerous and discordant groups or families, he holds the Bantu and the Hamitic to be the two original language-types, and the others to be the product of their mutual modification and mixture. The generalization is a grand and striking one: and if it be true, its demonstration in detail will constitute a highly important division of linguistic history. Without laying any claim to the detailed knowledge that would enable him to criticise it with authority, Prof. Whitney reported succinctly the author's views and arguments, and commented on them, especially on those to which he was obliged to take exception. In his opinion, there were too many questionable points involved in it to allow of our accepting it otherwise than provisionally, as a basis for further investigation.

There is, in the first place, the capital question whether the influence of one language can so metamorphose the structure of another as the theory would imply. The prevalent views as to language-mixture are called in this work an "assumption" and "prejudice;" but they appear rather to be the best induction thus far possible from the known and indisputable facts of mutual influence of languages, and cannot be put down except by actual proof of their inapplicability to a given case; if an offered solution of the African problem simply takes for granted their

falsity, we are driven to inquire whether some other solution is not possible. Prof. Lepsius draws up a list of twelve leading particulars in which the Bantu and Hamitic tongues differ, and by them tests the intermediate tongues, ascribing the agreements and disagreements of the latter to the influence of the one or of the other element. The method is not without its dangers, since the differences of any two languages may be taken as test, and other tongues will be found to stand upon the side either of the first or of the second with regard to each point of difference (for a door must be either shut or open); the question of origin of the discordance is still left to be settled. Two of the adopted criteria are of wholly indecisive value, because even the Hamitic dialects themselves differ in regard to them; two or three more are such phonetic matters as even nearly related tongues of other continents are sometimes found to differ upon; the rest arrange themselves mostly under two heads: prefix or suffix structure, and gender founded on sex. As to the first, the intermediate tongues are very discordant, and many of the facts brought to notice by Lepsius are in the highest degree curious and interesting; but it seems still to be open to question whether more of it all than he is inclined to allow, in Bantu and elsewhere, may not be the product of positive growth out of a less developed general condition, and not mere decay and metamorphosis of an original structure most nearly represented by the Bantu. We should not limit too narrowly the possibilities of new production in agglutinative tongues: our author himself gives a very notable example of this, in exhibiting the acquisition by certain Upper Nile dialects, not under Hamitic influence, of an apparent sexual gender distinction, growing, as he believes, out of an earlier, grosser and more material, distinction between stout and puny. Perhaps the wide territorial domain of the Bantu gives a false impression of its predominant importance as a factor in the history of African language; there is nothing in its present extension to prove that it might not have been originally a coördinate member of the congeries of Central African groups, to which favoring circumstances, along with the superior capacities of its speakers, have given a very exceptional growth; whether there is anything in the language itself to show the contrary, remains to be ascertained.

The subject of gender is one of leading interest in the Introduction, and the highest degree of value as a criterion is attributed by the author to this grammatical element. He holds, for example, the absence of gender in Nubian to be a sufficient indication that that language is fundamentally Central African; though in all the other respects considered by him it agrees with the Hamitic. He holds the Hottentot to be Hamitic solely because it has gender, while in other points of structure and in material no trace of anything Hamitic is discoverable about it, and while the physical type of the race is purely, if not exaggeratedly, African; he believes the Hottentots to represent a branch of Hamitic stock, severed from the rest by the crowding outward of the Bantu peoples, and pushed southward, with an ever-increasing admixture of African blood, till its Hamitic characteristics were completely swamped. And this, although he has shown us an example, as noticed above, of the virtual acquisition of gender by a body of African dialects, and the Persian offers a familiar example of a language of our own family that has utterly lost the distinction. He regards the common (and nearly exclusive) possession of gender by the Indo-European, Semitic, and Hamitic families as proving their ultimate relationship: the fact is certainly a very striking one, and that it may have so decisive a bearing need not be too dogmatically denied; while at the same time we are justified in regarding this as unproved, and even in the highest degree questionable, considering how probably the distinction appears to have been worked out in the course of the structural growth of each division of language. Prof. Lepsius endeavors to find a psychological basis for the African classes, on the one hand, in the attitude of African savage man toward nature, and for the genders of the higher races, on the other hand, in the regulation of the relations of the sexes which made family organization the starting-point of the superiority of those races. Various considerations were adduced, however, to cast doubt upon the sufficiency of either explanation. Thus, as regards the latter, it does not seem clear that a moral organization of the family, in our sense, any more than the virtues of benevolence and justice, are what advances a race that is struggling upward toward power; then, all languages have

distinct names for human beings in all their various relations, and can by help of these constitute the family as purely as they have moral sense for; and it is no honor done to the element of sex to extend it fancifully to everything in creation, any more than it would show a keen sense for form to call birds and the weather square, and goodness and headaches round; and the most important words designating gender in Indo-European, *father, mother, brother, sister, daughter*, have no gender characteristic, either in derivation or in inflection. On the whole, gender remains still the same difficult and trying problem as hitherto: unless we are to see in the special gender-development out of a distinction of size and dignity on the part of the group of Nile languages referred to above a valuable hint as to what the history of the same thing may have been in our own language.

Other of Prof. Lepsius's general views laid down in this work were reported: thus, for example, his repudiation of "Turanian" affinity for the race that laid the foundation of Mesopotamian culture, and his reduction of the latter to an Egyptian origin through Cushite mediation. The hope was expressed that he would take occasion to write himself out more fully on this subject, with statement of his reasons.

8. On a Manuscript Fragment of the Samaritan Pentateuch, by Prof. Isaac H. Hall, of Philadelphia; presented by Prof. Toy.

Some days ago, through the kind offices of Rev. Dr. W. Hayes Ward, I came into possession of a parchment folio, or pair of leaves, written in the Samaritan character, quite old, and somewhat obscure. It was obtained from a Jew, who stated that he brought it from Jerusalem fifty years ago.

The size of each leaf is $4\frac{1}{2} \times 3\frac{1}{2}$ inches; of the written page, $3 \times 2\frac{1}{2}$ inches. It is written with twenty-four lines to the page, except that a word is pushed into the twenty-fifth line on two of the pages, and on another the same is true of the punctuation at the end of a chapter. The style of writing is that of ordinary Samaritan manuscripts, with a fine point or dot to separate the words, here and there replaced by a punctuation mark like a colon. At the end of a chapter the punctuation is like that seen in Petermann's edition of the Book of Genesis in Samaritan characters. Spaces are left between the letters toward the end of a line when necessary, so that the last letters of the lines may stand in an upright, even column. No words are divided at the end of a line. A hole in the parchment, older than the writing, divides some words, in one case separating the letters by more than half an inch. Paragraphs are marked by leaving a whole line blank.

The manuscript is a fragment of the Samaritan Pentateuch, containing Numbers xxvii. 24 (beginning at **אֵת אֲשֶׁר עָשָׂה**)—xxviii. 16; xxxii. 23–42. An easy computation shows that just eight pages, or four leaves, or two folios, were inside this folio in the quire when the MS. was complete. It was therefore the middle folio, or one of the outer folios, of the quire: if the quire was a *ternio*, then it was the outer one, which I do not think was the case.

The writing begins in a verse which I have called 24, above; but it is a verse not there in the Hebrew, added after verse 23 from Deuteronomy iii. 21, 22, slightly altered. The paragraph and chapter end with this extra verse in the MS.; and the next paragraph ends with verse 10. Another paragraph ends with verse 15; and the page ends with the third word of verse 16, **בְּאֵרֶךְ עֵת**, of which last word only the first **ב** can be read without a lens, and the last two letters are hopelessly defaced. The previous word is interrupted by the hole: thus, **וְהָיָה**.

The next leaf begins with Numbers xxxii. 23, and has paragraph divisions at the end of verses 28 and 33. The last page ends with the chapter, at verse 42.

In connection with the following collation with Blayney's edition of the Samaritan Pentateuch (Oxonii, 1790) are noted the chirographical peculiarities not mentioned above. When not otherwise stated, or a parenthesis not used, the variation from Blayney's text is to be found in his lower margin as a manuscript reading. I have not thought it worth while to repeat them from his edition.

Chap. xxviii. 2, **לֹא** for **לֹא**. Here the **ל** seems to be a re-inking of a faded **ל**, and not a correction, or change of mind of the original scribe. The two letters

resemble each other very nearly in the script.—**נִרְדָּד** for **נִרְדִּי**. This is slightly different from Blayney's variant, which is **נִרְדִּי**.

Verse 5. **תַּעֲשִׂיתָ** for **תַּעֲשִׂיתָ**.

וְהַעֲפֵה for **וְהַעֲפֵה**. Here the **ע** is written over a faded **א**. It is difficult to account for this change in restoration except by ignorance. This variant is of course not given by Blayney.

Verse 7. **וְנִסְכֵּי** for **וְנִסְכֵּי**.

Verse 8. **וְנִסְכֵּי** for **וְנִסְכֵּי**.

Verse 9. Same as above in verse 7.

(Verse 12. **וְהַחֲדָד** is omitted by error of scribe, but added by a later hand above the line.)

Numbers xxxii. 24. **וְנִרְדָּד** for **וְנִרְדָּד** by mere error, but the **ד** is added above the line *prima manu*.)

(Verse 26. **וְהַעֲפֵה** for **וְהַעֲפֵה**, but the superfluous **ה** has a stroke drawn obliquely across it by a later hand in token of erasure.)

Verse 28. **וְהַחֲדָד** for **וְהַחֲדָד**.

(Verse 29. **וְהַחֲדָד** for **וְהַחֲדָד**; but the **ה** has a horizontal stroke drawn above it *prima manu*, in token of erasure.)

(Verse 33. **וְהַחֲדָד** for **וְהַחֲדָד**; but the **ה** is added above the line *prima manu*.)

Verse 38. **וְהַחֲדָד** for **וְהַחֲדָד**.

שֵׁם for **שֵׁם**.

So far as can be seen from this comparison, the manuscript appears to be a very respectable one. It is also evidently ancient; but how ancient, I have no means of determining. The collation discloses only one real variation from Blayney's text or margin; and that of no great importance. Its real interest lies in its disclosing the fact of a partial re-inking, and a correction both by the original scribe and a later hand, and the manner of so doing. It is worth while to remark that there is one vacant space, in one of the lines, large enough for a whole word. I am unable to determine whether this is an actual erasure, or left blank originally because of a defect in the surface, or to make the line come out even. In some cases the spacing seems to be done for the latter purpose throughout a whole line, sometimes only through the last half, but oftener only in the last word or two. One line leaves wide spaces between both the words and the letters of a word for that purpose.

9. On the Assyrian Monuments in the Museum of Fine Arts at Boston, by Rev. Selah Merrill, of Andover, Mass.

These monuments consist of seals, a number of casts of important relics, and one very fine slab, recently received, of Assur-nazir-pal, B. C. 885-860. This is similar to other slabs of this king that have previously been brought to the country, and from its perfect preservation it may be classed among the very best of them. The inscription upon it is clear, and is generally known as the "Standard Inscription." A detailed account of all the Assyrian monuments then known as having been brought to America, accompanied by translations, was presented to the Society by Mr. Merrill at its meeting in October, 1874. The design of the present paper was first to call attention to the desirability of supplying our museums with casts of these valuable relics and records from Nineveh and Babylon; secondly, to point out some new features in the slab here mentioned; and thirdly, to describe briefly some new inscriptions of Assur-nazir-pal that have lately been discovered.

Dr. Ward, of New York, had brought with him copies of all the recently discovered Hittite inscriptions, but the lateness of the hour rendered their exhibition impracticable.

After passing a vote of thanks to the American Academy for the use of its room, the Society adjourned until Wednesday, Oct. 26th, 1881.

Proceedings at New Haven, Oct. 26th, 1881.

The Society assembled at New Haven, on Wednesday, Oct. 26, 1881, at 3 o'clock P. M., in the usual place, the Library of the Divinity School. The chair was taken by the president, Prof. S. Wells Williams, LL.D., of New Haven, who in a few words returned thanks to the Society for the honor done him in electing him to fill the place made vacant by the resignation of Prof. Salisbury.

The minutes of the last meeting having been read, the Committee of Arrangements reported that they had accepted on behalf of the Society an invitation from the President to hold the evening session at his house, in a social way.

On the part of the Directors, the announcement was made that the Annual meeting would be holden in Boston, on Wednesday, May 24th, 1882, Professors Toy and Abbot being the Committee of Arrangements for it. They also recommended the election to Corporate membership of the following persons :

Prof. Francis Brown, of New York;
Mr. H. F. Burton, of Rochester, N. Y. ;
Prof. B. L. Gildersleeve, of Baltimore, Md. ;
Rev. J. S. Jenckes, Jr., of Des Moines, Iowa ;
Rev. S. D. Peet, of Clinton, Wisc. ;
Prof. Calvin Thomas, of Ann Arbor, Mich.

These gentlemen were then elected, in accordance with the recommendation.

The Committee of Publication stated that the first Part of Volume xi. of the Journal would doubtless be in the hands of members before the next Annual meeting.

On motion of the Librarian, a Committee was appointed to consider, in conjunction with the authorities of Yale College Library and of the Yale Divinity School, the transfer of the Society's Library to the premises of the latter.

Extracts from the Correspondence of the past half-year were read :

A member of the family of Professor Benfey, of Göttingen (an Honorary Member of the Society, deceased since its last meeting), writes from Berlin, expressing the hope of the family that his library, in accordance with his own earlier intimated desire, may be purchased entire by some American institution. It has been pronounced by authority of high rank "unusually complete in the departments which it represents."

Prof. J. W. Jenks, of Newtonville, Mass., has written repeatedly, urging the importance of putting on record the literary history of the Arabic translation of the Bible, before it shall be too late. The Corresponding Secretary said that he had referred the subject to Prof. Isaac H. Hall of Philadelphia (formerly for a time at Beirut), who had promised to take initiatory steps, at least, toward satisfying the probably widely felt desire to which Prof. Jenks gives expression.

Dr. D. B. McCartee, formerly of China, writes from New York accompanying the gift of certain Buddhist documents obtained in Japan, partly in Indian characters, and explaining their nature and value. They are:

1. A Sūtra, called by Dr. Eitel (Handbook of Chinese Buddhism) the *suvarṇa prabhāsa jinarāja*, one of the nine *dharma*s of the Nepalese, and ascribed to Ākṣyamuni himself. The volume contains the Sanskrit text of the work, with interlinear Japanese transliteration, and the Chinese version and comments, also interlined with Japanese.

2. A syllabary of the Sanskrit characters used in China and Japan, with explanations in the languages of those countries. It is a Japanese edition of the Chinese work called by Eitel (as above) the *Siddha-vastu*, or first chapter of the *Fan-chang*, a work in twelve parts attributed to Brahma. It is also noticed by Mr. Satow, in the "Chrysanthemum" (Yokohama) for Jan. 1881, p. 17, under the name of *Shittan Ji-ki*.

3. A rubbing (about six feet by three) of an inscribed *dhūraṇi*, or Buddhist formula, in Indian characters, from the temple of Kwannon (Kwan-yin), at Asak'sa, Tokio. The Chinese title over it is the same with that of the Keu-Yung Kwan inscription, described by Mr. A. Wylie in the Journ. Roy. As. Soc. for 1870 (Vol. v., pp. 14 ff.): namely, "Great *Dhūraṇi* of the honored diadem on Buddha's cranium." It contains just over 400 characters. Accompanying it is a manuscript transcription with interlined Japanese transliteration, and also a Chinese transliteration, both made by a Japanese scholar.

4. A photograph of the *tolo* (*dhūra*) pall described by Dr. Jamieson in the Trans. No.-China Branch Roy. As. Soc'y for December, 1865.

The following communications were presented to the meeting in the afternoon and evening:

1. Notice of F. Delitzsch's views as to the alleged site of Eden, by Prof. C. H. Toy, of Cambridge.

Delitzsch's recent work entitled "*Wo lag das Paradies?*" is distinguished above all its predecessors on the same subject by fulness of learning and sobriety of judgment; and its notes and appendices furnish a very valuable collection of geographical and linguistic remarks. After a criticism of other theories, the author points out that the writer in Genesis ii. had in mind an actually existing place as his Eden, and deals with known geographical data; his tone, as well as that of Ezekiel, is purely historical; he shows for himself, and assumes for his readers, the same sort of knowledge of Pishon and Gihon, of Havilah and Kush, as of Tigris and Euphrates and Asshur. Delitzsch regards the essential identity of the Babylonian and the Old Testament cosmogonies as satisfactorily demonstrated; nor does he regard it as open to question that the Babylonians and not the Hebrews were its originators. Wherever, then, the Babylonians placed Eden, there the Hebrews placed it when they received the story. And if they received the latter at the time of the exile, in the 6th century before Christ, as Delitzsch holds, it must agree with the Babylonian doctrine of the same period, which was preserved in documents going back to the earliest known times of Babylonian (Accadian) civilization. We have every reason to presume that there is geographical consistency in the Babylonian account. The problem, then, is a simple one: what four rivers are there, branching from one common stream, two of them being the Tigris and Euphrates, and the other two in close proximity with the lands of Kush and Havilah? Such a group can of course be found only in Babylonia; and, as no four rivers proper now exist there, the theory has been suggested and worked out by various authorities, that the Pishon and Gihon are to be recognized in some of the numerous canals with which that region was filled. Any theory placing Eden below the junction of the Tigris and Euphrates is excluded by the fact, brought prominently out by our author, that in the 6th century B. C. the two rivers did not unite before reaching the Persian Gulf.

Delitzsch's view then is, that Havilah is the northeastern part of the Syrian desert, touching on the Babylonian Euphrates, and traversed by the canal Pallakopas, in which is to be recognized the Pishon of Genesis. The Asiatic Kush he

identifies with the territory of the Elamitic Sumerians, dwelling on the north-eastern and northern shore of the Persian Gulf; through it runs the Shat-en-Nil, which is the Gihon. The Garden of Eden is the Karduniash, the so-called Isthmus, watered by the Euphrates, the left bank of which is here considerably higher than the right bank of the Tigris. To the dwellers in that region the Euphrates would seem to be the one river, from which parted not only the two great canals, but also the Tigris, which was connected with the Euphrates by a cross-canal. The two canals were probably old river-beds, and, being navigable and very ancient, might naturally be called rivers.

Prof. Toy presented in some detail the evidence relied on by Delitzsch to establish the truth of the various parts of this theory; and, while pronouncing it to come nearer than any hitherto proposed to meeting the requirements of the narrative in Genesis, proceeded to point out certain respects in which the author's statements do not seem to be entirely satisfactory.

1. There must be doubt about the positions assigned to Havilah and Kush. According to Delitzsch, Havilah extends from a point south of Judah to the bank of the Euphrates, and farther north than Babylon. Such a position for the Joktanite Arabs is somewhat surprising, especially as the tribe or region Yobab, which follows Havilah in Gen. x. 29, must have lain still farther north. Unfortunately the datum in Gen. x. 30 ("the dwelling of the Joktanides was from Mesha to Sephor, a mount of the east") is too indefinite to help much. Nor can it be said to be made out that Kush is identical with Babylonia. The genealogical statement in Gen. x. 7 confines Kush to Arabia (Havilah also being a son of Kush), and elsewhere in the Old Testament it means either Arabia or Ethiopia. Ezekiel, who shows so many points of contact with the 10th chapter of Genesis, and who was probably well acquainted with Babylonian geography, uses Kush of Ethiopia only. The fact that Nimrod, to whom is assigned the kingdom of Babylonia, is said to be a son of Kush, would hardly be sufficient ground for assigning the name Kush to Babylonia.

2. There is further the meaning of the participle *סָבַב*, 'encircling,' which is used in describing the geographical relation of the streams Pishon and Gihon to Havilah and Kush respectively. Delitzsch remarks that the word may mean 'traversed;' but this is not borne out by the usage of the Old Testament; in none of the passages that he cites will the verb admit this signification. In what sense can the Pallakopas be said to "encircle the whole land of Havilah?" It might be properly said, perhaps, to pass along its frontier, to form its boundary; but, if this were meant, the expression would be different, as in the case of the Tigris, which is described as flowing "in front of Assyria." There is a difficulty here which Delitzsch's exposition does not remove.

3. Again, the relation of the four branches or "heads" to the main river involves difficulty. It does not clearly appear how a Hebrew writer, knowing the geography of Assyria and Babylonia, could call the Tigris a branch of the Euphrates. Delitzsch himself dwells on the distinctness of the geographical knowledge of this region possessed by its inhabitants, and this I see no reason to call in question. But the distinctness of their knowledge, the more certain it must have been to them that the Tigris was an independent stream, in some places greater than the Euphrates, and not at all to be regarded as one of its branches.

Further, we must ask why, if the Euphrates was the main Eden-river, it was not called by its name. A river, says the narrative, went out of Eden to water the garden, and thence parted into four streams, of which the Tigris and the Euphrates are two. As the writer is giving geographical details, why does he not say distinctly that this river was the Euphrates? His silence cannot be attributed to ignorance, or to geographical carelessness; it is evident that he is ready to tell all that he knows of the locality. As the fourth branch is given as the well-known river Euphrates, one does not see why the main stream should not be named, if it was known as the Euphrates. Possibly the writer might have thought it geographically inconsistent to give the same name to the main river and to one of its branches; but we should hardly look for such scrupulousness.

Delitzsch's theory is a strong and well supported one, but it labors under these difficulties, which must be set aside before it can be accepted.

2. On Non-diphthongal *e* and *o* in Sanskrit, by Prof. Maurice Bloomfield, of Baltimore, Md.

The discussion starts with the statement that it is impossible to explain the *e* of the so-called contracted weak perfect stems, like *sed-* in *sedimá* etc., as diphthongs. The type of these perfects is older than the beginning of the separate life of the Indian languages, and any explanation of it made for Sanskrit alone is insufficient; and if the *e* in forms like these is explained as a diphthong, the same explanation must hold good for all other languages that exhibit this method of forming perfect stems, which is not the case. The *e* of this type is now generally held to be long *ē*, the result of short *ē* plus the tone of a sonant consonant, which has itself fallen out, but left its tone to preserve the long quantity of the syllable: e. g. Skt. *sedimá* stands for **sē-sd-imá*, **sē-(z)d-imá*, where the *z* in falling out left its tone behind it; this lengthened the *ē* preceding it into *ē*. In the same way Latin *sedimus* and Gothic *setum* must be referred to the Indo-European stem **sē-zd-*, *sēd-*; and in these languages the explanation of the *ē* as a diphthong is simply impossible. In *sedimá* the *ē* is Indo-European; it has been generated in the same manner within the history of Sanskrit itself in *edhí*, which cannot be explained except by referring it to **ēs-dhí*, **ē-(z)d-hí*; so also in *dehí* and *dhehí*, which are equal to **dez-dhí* and **dhez-dhí* (Zend *dazdī*), and in a few others, most of which are treated by Johannes Schmidt, Kuhn's *Zeitschrift*, xxv. 60 fg.

The explanation of these *e* as long *ē*, the result of short *ē* plus the tone of a sonant consonant, is supported by the entirely parallel way in which long *ī* and *ū* are the results of short *ī* plus the same tone, which a sonant has left as compensation on falling out. A case in Indo-European times is exhibited in the present stem *sid-* of Skt. *sí'dati*, Zd. *hidaiti*, Lat. *sido*; which is equal to **sī(z)d-*, precisely as *sēd-* is equal to *sē(z)d-*; within the Sanskrit itself *mīdhá* = Gr. *μῑδῆς*; *nídá*, 'nest,' stands for **nīz-dá*; the participles *līdhá*, *mīdhá*, for **līz-h-lí*, **mīz-h-lí*. For the word *vidú* affinity with Latin *vidis* for **visidis* is suggested, so that its *ī* is again the result of compensation for short *ī*. In the same way long *ū* in cases like *ādú* and *mūdú*, *dādúbha* and *dānīca*, etc., is the result of short *ū* compensated by the tone of the sibilant which has fallen out (**dūz-dibha* etc.).

It has been seen that long *ē*, *ī*, and *ū*, when the result of compensatory lengthening, have originated from their corresponding short vowels *ē*, *ī*, and *ū*; this creates a presumption in favor of an attempt to explain the *o* as a like result of compensatory lengthening.

The word *śodāca* is especially interesting, because it is so different from all the numerals with which it could be associated mentally; there is no analogical numeral formation by which its *o* could be accounted for, and it must be explained as the result of organic growth. And *śodāca* is naturally explained from *śōzdaça*, where the *ō* has been changed from *ē* by the *v* which preceded it, as in Zend *kshshvas* and in the Greek inscriptional form *φεξ*.

The peculiar nominatives in the Rig-Veda—*avayū's* from the stem *avayū'j*, *purodū's* from the stem *purodū'j*—and the nom. *çretarū's* of the grammarians, cannot be explained organically as coming from the several stems plus the *s* of the nominative. They can only be analogical formations, and the only forms which could have given rise to them are the *bh*-cases, *avayobhis*, *purodobhis*, and *çretarobhis*, which are preserved by the grammarians. It is found that root-stems which have long *ū* in the strong cases often show *ā* in the weak ones; that this short *ā* is probably the representative of *ō* or equal to *ō* is shown by Greek declensions like *κλώψ κλωπός*; *σάφρων σάφρονος*; *ὦψ* to *ὥπι*. We assume then that before the *bh*-endings (as *avayūz-bhis*, *purodūz-bhis* and *çretarūz-bhis*) the sonant sibilant has fallen out as in *śo-dāca*, and compensated the short *ō* by lengthening it into *ō*; so far as can be seen, forms like these, and only such, could have given rise to *-anominatives*, *avayūs* etc., on the basis of a proportion *āngirobhis*: *āngirās*: *avayobhis*: *avayūs*.

The main point of the paper is the explanation of the change of final *as* into *ō*. The *ō* in such cases is not a diphthong; it is long *ō*, the result of short *ō* plus the tone of the sonant sibilant *z* which has fallen out. Short Indo-European *ō* is accordingly not entirely dead upon Indian ground, any more than short *ī*, *ē*, *ē*; both have been preserved in certain cases as long *ē* and *ō*. The euphonic change

of a sound-group *açvô dravati* differs from that of a sound-group *ēdhi* only in the quality of the short vowel which preceded the change: **açvôz dravati* is the historic precursor of **açvô dravati*, precisely as **ēzdhi* of *ēdhi*.

There are great difficulties besetting this explanation; but they are not to be regarded as insurmountable. In the first place, final *as* does not correspond to European *os* alone, but also to European *es*; in the latter case it ought to appear as *ē*: **agnayē duhanti* for **agnayēs dahanti*. That this state of things once did actually exist in India appears to be rendered strongly probable by certain dialectic phenomena. In the Magadhi-dialect, original final *as* generally appears as *ē*; cf. Hemacandra iv. 288, and Vararuci's *Prākṛta-prakāśa* xi. 10. And if we were disposed to distrust the historical legitimacy of the phenomenon in a late and artificial dialect like the Magadhi, we are convinced that this final *ē* is a linguistic fact, because the inscriptions found in various parts of the old Magadha district show the same *ē*. Such are the inscriptions of Aṣoka in Dhauli; they have final *ē*, while the same inscriptions at Girnar in Guzerat show final *ō*. The reason why the original difference between *açvô dravati* and **agnayē dahanti* was lost is clear. As soon as the difference between **açvôs* and **agnayēs* before surds was wiped out, because both short *ō* and short *ē* were written as short *ā*, there was no longer any basis for the differentiation of *açvô* and **agnayē*; one or the other had to disappear; that the *ē*-forms usually succumbed may probably be brought into connection with the fact that final Skt. *as*=Eur. *os* is about 2½ times as common as final Skt. *as*=Eur. *es*. When this disappearance of *ē* for *os* began, it is almost impossible to say. On the one hand, there are many facts that would seem to prove that the process was started in Aryan times, when the Indian and Iranian languages were still one; it is a *fait accompli* in the Vedic Samhitās; in most of the Prākṛit dialects and in Pāli, *ō* is simply substituted for *os* without reference to the character of the following sound; the Iranian has carried the process of extending the *ō*-forms on the one hand farther than Pāli, namely into composition; on the other hand, the *os* has survived before enclitics: *mananōhō*, but *mananōhaça*. But there are facts also which appear to prove that the *ō* accomplished the task of crowding out the *ē* separately in the various dialects of the Indo-Iranian languages; such are the victory of *ē* over *ō* in Magadha, and the distinct traces of *ē* by the side of *ō* in Iran, which will be pointed out below.

The form in which stems in *as* (*manas*) in Skt. appear before the *dh*-endings has deviated from the original. For here, as in the case of final *as*, we must be guided by the vocalism of Europe; this is unequivocal. Homeric *ἐπέθεσθιν*, *στρέφουσιν*, etc. point to Indian forms like **manebhis* etc. Of these there is no trace; *ō* has here also crowded out *ē*. But the Zend has preserved the historical form most strikingly: *raocēbyō* from *raocānh*, *avēbis* from *arānh*, etc., both in the Gāthā-dialect and in the later Avestan. The position of this *ē* in the language points with perfect distinctness to a genesis from a short *ē* (Hübschmann's and Justi's *e*), and through this *e*, to a connection with simple Skt. *u*; on the other hand, the *ē* just as clearly shows affinity with that *ō* which in the later Avesta alone stands for final *as*, and is actually found to interchange with it in the Gāthās, and like it to exchange with *as*; for when we have forms like *manē* for *manō*, *vacē* for *vacō*, *yikē* (*kas-nā*), we are bound to recognize here that stage in which final *os* and *es* are still both in existence, although the laws with regard to the use of one or the other have been necessarily wiped out along with the difference between *ē* and *ō*; the *ē* of *raocēbis* is the same *ē* as the final *ē* in the Gāthās, and has escaped that levelling process which in the later Avesta has substituted final *ō* for *ē* everywhere at the end of a word by virtue of its more protected position. It is interesting and fortunate that there is no possibility of explaining *raocēbis* etc. as analogical formations, because the Zend has, unlike its sisters in India, separate forms for long *ē* and *ō* clearly differentiated from the *i* and *u* diphthongs. While an Indian **rocebhis* would be subject to the suspicion that it had in some way become contaminated by the *a*-declension, or was an *a*-formation parallel with the *as*-formation, as is often enough the case, such an eventuality is here ward off by *daēraēbyō*, *arethaēbyō*, etc.

There remains an exception in Sanskrit, contained in the later rule, that final *as* before *ā* changes to *ō*, and the following initial *ā* is dropped. The difficulty lies in the change of a syllable short by nature and position into a long one; there is

here no ground for compensatory lengthening. It is believed that in unravelling the meshes of this exception the last trace of a value of final *ās* equal to *ēs* will be detected on Vedic ground. In the later language, not only final *ō* from *as* produces the elision of initial *ā*, but any other *ō*: and, what is more, *ē* also produces the same effect. We must however turn to the earlier Vedic language before we can begin to explain; and here the complexion of the two rules we are dealing with is changed materially. Final *as* is still written *o* before *ā*, and we find this *o* again in juxtaposition with final *e*, for in the Veda also the initial *ā* is elided after *e* and *o*: only with this difference, that the elision is here the rare exception, not the rule. It is impossible to explain the elision after *e* as a mere analogical process, an imitation of the properties of a parallel sound, the *o*, because we are dealing with an ill-regulated tendency, itself too vague and undefined to furnish the firm foundation of facts likely to exercise the necessary attraction. It will be necessary then to recognize the fact that the elision after *e*, just as that after *o*, stands on its own basis, and to explain how two sounds of a character so widely different (*o* is almost always the product of *as*, *e* always a historical diphthong) show the same tendency in the earlier language to elide a following *ā*.

The organic parallelism of *e* and *o* in early times is proved by a still more striking fact. A. Kuhn has shown, in his acute investigations on Vedic language as exhibited by metrical conditions, that in the Rig-Veda final *e* and *o* before vowels are themselves short (see especially Kuhn & Schleicher's *Beiträge*, iii. 118 ff.). His proof, as far as *ō* is concerned, may be called almost a linguistic necessity, there being no reason for a lengthening of final *ās* before *a*; but what is to be done with the diphthong *e*, which is nothing but a diphthong in historical times: what is the reason of its short quantity?

It is believed that the following explanation will be found to remove the difficulties involved: 1. Final *ās* and *ēs* simply dropped the *s* before vowels, whether *ā* or any other vowel followed. As the Indian alphabets possessed no signs for either short *ē* or *ō*, they had to put signs actually existing in their places: before all vowels except *ā* the short *ā* was chosen, the sign being indeed insufficient to render the color of the vowels, but doing perfect justice to the quantity; before *ā*, the disinclination to allow two identical vowels to follow upon one another was probably the motive which led to another possible expedient, by which the vocalic color was preserved, but the quantity sacrificed in writing, by employing the signs *o* and *e*; this, it is believed, is the starting point from which the remarkable juxtaposition of *e* and *o* in the euphonic rules must be explained. 2. These *ē* and *ō*, coinciding graphically with the long and diphthongal *ē* and *ō*, ended by attracting them to their own condition, so that every *e* and *o*, without reference to its origin, was pronounced short before *ā*; but then, also, the other vowels, which indeed would occur almost only after *e*, were drawn into this rule; so that the shortening of *e* and *o* took place before all vowels. This is the condition of things which Kuhn finds; and it may be added, as a valuable proof that this shortening does not take place on the principle *vocalis ante vocalem corripitur*, that in a few instances the short values occur before consonants also. 3. Before the period from which our Vedic material dates, the final *ō* (written *ō*) for *ās* had also absorbed the final *ē* (written *ē*) for *ēs*, precisely as in the case of final long *ō* and *ē*; so that only those *e* were left which could preserve their existence from the fact that they occurred also in other connections than merely before initial vowels: namely, the diphthongal *e*, which had been drawn secondarily into the treatment as short vowel. We have then the last vestige of final *ēs* on Vedic and Sanskrit ground in the short value of *e* in the Veda, and also in the sporadic elision of initial *a* following. 4. The vanishing of initial *ā* after *e* and *o* has thus far been called by a name which for the later language is well and expressive enough, namely elision. That it is however in reality not elision is clearly enough to be recognized from the fact that the resulting accentuation takes account of the *a*; the tone of the *ē* or *ō* that results shows that the *a* has been united with the *e* and *o*. Two peculiarities are then connected with this phenomenon: first, that *e* and *o* do not, as might be expected before vowels, resolve themselves into semiconsonantal groups; second, that the combination occurs so sparingly in the Rig-Veda. The first difficulty falls aside, because the *o* and *e* are not diphthongal, but short *ō* and *ē*; the law according to which these combine with following *ā* then lies before us: Short

ē and *ō* combine with following *a* to long *ē* and *ō*, subject to the same accentual laws for the result as other combinations of two short vowels; the infrequency of the union of these short *ē* and *ō* in the Veda is simply due to the fact that in both cases a euphonic process has preceded, and the hiatus which is the result of a euphonic process is, as is well known, regularly allowed to remain, the secondary contraction being of rarer occurrence. There is to be sure a great difference in the chronology of the hiatus: that between *ō* and *ā* is made before our very eyes; that between *ē* and *ā* appears as the last faint reflex of final *ēs*, kept alive only by the fortunate fact that this *ē* had attracted to itself by analogy the diphthongal *e*-sounds, which were not liable to succumb to the inroads of the stronger sister-sound *o*.

3. On the Aboriginal Miao-tsz' Tribes of southwestern China, with Remarks on the Nestorian Tablet of Si-ngan fu, by Prof. S. Wells Williams, of New Haven.

Before taking up the proper subject of his paper, Dr. Williams called attention to the fact that this year is the 1100th anniversary of the erection of the celebrated Nestorian monument in Si-ngan, the ancient capital of China, and recalled to the recollection of the Society the principal facts in its remarkable history. A recent rubbing taken from the tablet itself was exhibited, to show its continued good condition. The monument was visited in 1866 by two English missionaries, Messrs. Williamson and Lees, who found it built into a brick wall in such a way as to shield it from the weather. This had been done in 1859, by a Chinese named Han Tai-hwa, who had added a brief inscription at the side, stating his regret at its former neglected condition, and his desire to preserve it. In 1874, three American missionaries again visited it, and obtained rubbings from its face; they also learned that the citizens of Si-ngan were well aware of the age and importance of the tablet. The brickwork put up in 1859 had, however, been meanwhile destroyed by some Imperial soldiers; and Rev. Arthur Smith says that the stone now stands in an open court without any shelter. Five other tablets stand in a row with it. The demand for rubbings from it is a partial guarantee that it will be carefully preserved. Its material is said to be a kind of silicious limestone. The capital Si-ngan was abandoned in A. D. 904 for Loh-yang in Honan, and was left in a ruinous condition. The tablet was probably placed in the cathedral church of the Nestorians there, and if this church was destroyed, or pulled down for its materials, its roof and other parts not worth carrying off would furnish plenty of earth and debris to cover the stone as deep as it was found in 1625. The notice of its discovery at that time gives no particulars as to its situation; but the hypothesis above made would account for its good condition. The fact that tablets of a similar character are still set up in temples and burial-places all over China leads to the hope that others may yet be found connected with the Nestorian religion; for it would be strange if only this single relic of a faith that existed in the Middle Kingdom for about eight centuries had ever been erected. Rather it may be regarded as an earnest of what future explorations will reveal, when they come to be prosecuted by competent men, working at their leisure. The recent discoveries in Western Asia of various relics in the form of inscriptions, substructions, and monuments, proving the existence of ancient nations like the Hittites and Accadians, has stimulated the researches of qualified scholars everywhere in that region. In such researches, the discovery of a single stone with a legible inscription opens the path to a wider field than the excavation of a whole city showing only the foundations of houses or the slabs of sidewalks. The Moabitic stone did its best work when it added its testimony to the authenticity of the story of King Mesha, in the second book of Kings—a testimony given out, so to speak, at its last gasp. In Eastern Asia, sovereigns and great men have depended more on literary records than on great buildings and monuments to perpetuate their history; and consequently we have hitherto few epigraphic memorials of their existence. But the probabilities are strong that further search will bring more of them to light in China, when foreigners and educated natives are able to look for them.

Dr. Williams then exhibited a collection of forty water-color paintings of figures

of as many tribes of Miao-tsz', by a Chinese artist. They were obtained by him in Peking. Such sketches are not rare in China, and he had seen others superior in execution to these. To each picture is added a short description of the tribe, and translations of several of these were read. They do not give much information as to the origin or numbers of the delineated tribes, but are rather designed to direct the reader's attention to their leading characteristics. Volume xiv. of the Chinese Repository contains the complete translation of a like series of descriptions accompanying pictures; these are briefer, and the illustrations of inferior workmanship. The Miao-tsz' have shown no desire to record their history and sufferings; and ages of degradation have reduced them to the fragmentary condition in which they now appear.

The name Miao was early applied in Chinese books to the aborigines who refused obedience to the Emperor. In the Book of Records they are called the *San Miao*; and they successfully resisted the control of the Chinese as early as B. C. 1000. Some of them are also termed *Nan Man*, and occupy portions of the present Hunan and Kweichau provinces; most of them were first conquered about B. C. 250-220.

The Miao-tsz' are connected in their racial affinities with the Laos and Lolos people of Siam and Burmah. Their national designation is *Li* or *Lo*; one of these names is still retained in *Li-mu*, the present designation of those dwelling in the island of Hainan; the other is found in the last part of *Siem-lo*, the common Chinese name for Siam, from which we derive our own. The Miao-tsz' themselves use both *Li* and *Lo* for some of their tribes. Dr. Edkins of Peking has compared many common terms found in twelve Chinese vocabularies of Miao-tsz' words, contained in two topographies of Kweichau and Kwangsi provinces, and other special Chinese works on these tribes.

Reference was made to the visit, in 1870, of the late German missionary Krolczyk to a tribe called *Yao-jin*, dwelling in the northwest of Kwangtung province, in Lien-chau. (See Missionary Recorder, vol. iii., pp. 62, 93, 126.) The great precautions these mountaineers took to prevent strangers entering their districts showed their fear of the inroads of the Chinese, and their long habits of seclusion. In their social and domestic life they have sunk far below the Chinese dwelling in the lowlands, and now maintain their individuality chiefly by their seclusion. The total number of Miao-tsz' still left in China cannot be guessed with any probability; I should place it at less than a million. The French traveler Mohout, who died on his journey from Cambodia to Hankow, thus fairly sums up the intellectual status of this race: "I am getting tired of these people, a race of children, heartless and unenergetic. I sigh and look everywhere for a man, and cannot find one. Here all tremble at the stick, and the enervating climate makes them incredibly apathetic."

As selections from a number of the descriptions read, the following ten will show the small value of the information they give.

"1. The *Yang-tung Lo-han*.—These are found in Li-ping prefecture [in the southeast of Kweichau]. The men are farmers and carry on trade; the women tie their hair in a slovenly manner, and insert a wooden comb before the temple. Ear-rings are made of gold and silver hanging in a chain. They bind a double girdle which meets on the back. Sometimes they wear long trousers and short skirts; at other times long skirts and no trousers. They rear silkworms and weave brocade silk. On festival days they wash their hair with perfumed water. Among the Miao and Mau tribes, few are found that excel this one.

"2. The *Kih-mang Miao*.—This tribe lives in the townships Kin-choh in Kwang-shun chan [near the capital of Kweichau]. The people select overhanging cliffs in which they dig caves for dwellings: some of them are over a hundred fathoms high: bamboo ladders are used for ascending and descending. They have no plows drawn by oxen, but use iron hoes; they cover in the seed without plowing. Men play on the *säng*, and thus find their mates. After a child is born, the marriage presents are sent to the woman's parents. When a relative dies, they sing and dance, calling it fighting the corpse. When the cuckoo's note is heard the next spring, the whole family raise a lamentable cry, saying, The birds have come back, but our parents will never return to us.

"5. *Ling-kiu Miao*.—This tribe resides in Li-po district [in Tu-yun fu, near the

south border]. All classes of men and women cover their heads entirely with blue kerchiefs. In the eleventh month the unmarried youth dance and sing, each selecting the partner who pleases them. Whenever a child is born the girl returns with her partner, but no wedding takes place if otherwise.

"6. *Tung-kiu Miao* or Cave-dwelling Miao.—This tribe also lives in Li-po district [in Kweichau]. They wear black garments reaching only to the knees. On New Year's day they place fish, meat, spirits, and rice in wooden trenches, and thus offer them. They live near the streams, and raise fine cotton. The women are industrious weavers. The men can talk Chinese, but do not know how to read the characters. When they have any business, they use notched sticks for letters.

"7. *Shui-kiu Miao*, or Water-dwelling Miao.—These live in Li-po district. The men are expert in fishing and hunting. The women dress in ribbed skirts, which are short, and mixed all around with flowered pieces. At New Year's men and women assemble in crowds to dance; it is allowable for them to marry without observing the rites.

"8. *Luh-ngeh tsz'*, or Six-forehead people.—These live [in the west of Kweichau province near Yunnan], in Ta-ting prefecture, in Wei-ning district; there are both black and white people. The men braid the hair in a pointed knot. Women wear long garments but no petticoats. The dead are buried in coffins; and after a year's interval they invite their relatives to come on a lucky day around the grave, when they make an offering of an animal and spirits. The grave is opened, and the bones taken from the coffin, brushed and washed clean, and then re-interred, wrapped in cloth. After one or two years they repeat this act, and so till seven times are fulfilled; then they cease. If one of the family is taken sick, they say, 'Your ancestor's bones are not clean,' and take them out to wash them. Hence they are called Wash-bone Miao.

"11. *Kiu-ming Kiu-sing Miao*, or Nine name-surname Miao.—These live in Tuh-shan district, in southern Kweichau. They are of a treacherous and violent disposition; they often falsely assume other peoples' names and surnames. At weddings and funerals they kill oxen and assemble to drink; when excited by drink they quarrel, and those who receive wounds are willing to settle the matter by receiving cattle. The women cultivate the land, raising hill sorghum for food.

"12. *Yé-tau Miao*, or Gentlemen Head Miao.—These live in Ku-chau, in the southeast of Kweichau. They use no oxen in plowing, but take men to drag it. The first day of the eleventh moon is a great festival. The women braid their hair and adorn it with garlands made of silver wire shaped like a fan, fastening them with a long skewer shaped like a guitar. In marriage, a paternal aunt's daughter must marry her cousin, and have a dowry of money. If they are too weak to work themselves, this money enables them to hire a son or grandson to work. If they have no marriageable son, the girl must allow the uncle to arrange the match for her and take the dowry, which is hence called the niece's dowry. If this be not done, he will not permit her to marry.

"15. *Tsing-kiang Heh Miao*, or Black Miao of Clear-water River.—The men dress in red cloth, the women in black. They bind their hair with silver bands and wear large ear-rings. They wear wide trousers and are fond of dressing in particolored garments like play-actors. On pleasant days in spring they go to high cliffs, carrying liquor with them which they drink out of cows' horns. They are very licentious.

"16. *Lau-kü Heh Miao*, or the Black Miao who live in lofts.—These live in Pah-chai in Tan-kiang ting. The men work hard at plowing. Women make hair-pins of rams' horns. They prefer to live in the upper story. When a death occurs, the body is confined and kept; after twenty years have passed, the whole village choose a lucky day, and bury from ten to a hundred coffins at once. A hall is erected by the people to worship the dead in, called Demon's Hall; whatever is placed there is regarded as sacred, for it would be unlucky to take anything. These people rear animals; they live in the lofts, and the stock is tended below."

4. On the so-called Henotheism of the Veda, by Prof. W. D. Whitney, of New Haven.

The following is a succinct view of the subject as presented in this paper:

We have long been accustomed to class religions as monotheistic and polytheistic, according as they recognize the existence of one personal God or of a plurality of such, and to call pantheistic a faith which, rejecting the personality of a Creator, accepts the creation itself as divine, or holds everything to be God. The last of these is the one least definite in character, and confessedly latest in the order of development; nor has it any popular or ethnic value; it is essentially a philosophic creed, and limited to the class of philosophers. The other two, monotheism and polytheism, divide between them the whole great mass of the world's religions. As to which of the two is the earlier, and foundation of the other, opinions are, and will doubtless long or always remain, divided, in accordance with the views taken respecting the origin and first history of the human race. But it does not appear doubtful that they will settle down into two forms: either man and his first conditions of life are a miraculous creation, and monotheism a miraculous communication to him, a revelation; or, if he is a product of secondary causes, of development, and had to acquire his knowledge of the divine and his relations to it in the same way with the rest of his knowledge, namely by observation and reflection, then polytheism is necessarily antecedent to monotheism; it is simply inconceivable that the case should be otherwise—nor can we avoid allowing everywhere a yet earlier stage which does not even deserve the name of religion, which is only superstition.

Nearly all the religions of men are polytheistic; monotheisms are the rare exception: namely—1. The Hebrew monotheism, with its continuators, *a.* Christianity, and *b.* Mohammedanism; and 2. the Persian monotheism, or Zoroastrianism (so far as this does not deserve rather to be called a dualism): the former apparently has behind it a general Semitic polytheism; the latter certainly grows out of the Aryan or Indo-Iranian belief in many gods. That they should be isolated products of the natural development of human insight is entirely in harmony with other parts of human history: thus, for example, all races have devised instruments, but few have reduced the metals to service, and the subjugation of steam is unique; all races have acquired language, but few have invented writing: indeed, all the highest elements of civilization arise at single points, and are passed from one community to another.

A single author, of much influence—namely, M. Müller—has recently endeavored to introduce a new member, with a new name, into this classification: he calls it *henotheism* (or *kathenotheism*), 'the worship of one god at a time,' as we may render it. The germ of his doctrine is to be found in his History of Ancient Sanskrit Literature; where, after speaking of the various gods of the Veda, he says (p. 532, 1st ed., 1859): "When these individual gods are invoked, they are not conceived as limited by the power of others, as superior or inferior in rank. Each god is to the mind of the suppliant as good as all [*i. e.* as any of?] the gods. He is felt at the time as a real divinity—as supreme and absolute, in spite of the necessary limitations which, to our mind, a plurality of gods must entail on every single god. All the rest disappear for a moment from the vision of the poet, and he only who is to fulfil their desires stands in full light before the eyes of the worshippers." And later (p. 526), after quotation of specimens: "When Agni, the lord of fire, is addressed by the poet, he is spoken of as the first god, not inferior even to Indra. While Agni is invoked, Indra is forgotten; there is no competition between the two, nor any rivalry between them or other gods. This is a most important feature in the religion of the Veda, and has never been taken into consideration by those who have written on the history of ancient polytheism." In his later works, where he first introduces and reiterates and urges the special name *henotheism*, Müller's doctrine assumes this form: (Lect. on Sc. of Rel., p. 141) that a henotheistic religion "represents each deity as independent of all the rest, as the only deity present in the mind of the worshipper at the time of his worship and prayer," this character being "very prominent in the religion of the Vedic poets;" and finally (Or. and Growth of Rel., lect. vi.), that henotheism is "a worship of single gods," and that polytheism is "a worship of many deities which together form one divine polity, under the control of one supreme god."

As regards the fundamental facts of Vedic worship, Müller's statements so

exaggerate their peculiarity as to convey, it is believed, a wholly wrong impression. It is very far from being true in any general way that the worship of one Vedic god excludes the rest from the worshipper's sight; on the contrary, no religion brings its gods into more frequent and varied juxtaposition and combination. The different offices and spheres of each are in constant contemplation. They are addressed in pairs: Indra-Agni, Indra-Varuṇa, Mitra-Varuṇa, Heaven and Earth, Dawn and Night, and a great many more. They are grouped in sets: the Adityas, the Maruts, Indra and the Maruts, and so on. They are divided into gods of the heaven, of the atmosphere, of the earth. And they are summed up as "all the gods" (*viśve devās*), and worshipped as a body. Only, in the case of one or two gods often, and of a few others occasionally (and of many others not at all), the worshipper ascribes to the object of his worship attributes which might seem to belong to a sole god: never, indeed, calling him sole god, but extolling him as chief and mightiest of the gods, maker of heaven and earth, father of gods and men, and so on. This fact had been often enough noticed before Müller, but no one had had any difficulty in explaining it as a natural exaggeration, committed in the fervor of devotion. And it is in fact nothing else. This is evidenced by its purely occasional or even sporadic character, and by its distribution to its various objects. The office of Agni, as the fire, the god on earth, mediator and bearer of the sacrifice to the other gods, is as distinct as anything in Vedic religion, and the mass of his innumerable hymns are full of it; but he, in a few rare cases, is exalted by the ascription of more general and unlimited attributes. The exaggerations of the worship of Soma are unsurpassed, and a whole Book (the ninth) of the Rig-Veda is permeated with them: yet it is never forgotten that, after all, *soma* is only a drink, being purified for Indra and Indra's worshippers. The same exaltation forms a larger element in the worship of Indra, as, in fact, Indra comes nearest to the character of chief god, and in the later development of the religion actually attains in a certain subordinate way that character: but still, only as *primus inter pares*. These are typical cases. There is never a denial, never even an ignoring, of other and many other gods, but only a lifting up of the one actually in hand. And a plenty of evidence beside to the same effect is to be found. Such spurning of all limits in exalting the subject of glorification, such neglect of proportion and consistency, is throughout characteristic of the Hindu mind. The Atharva-Veda praises (xi. 6) even the *uchista*, 'the remnant of the offering,' in a manner to make it almost supreme divinity: 'all sacrifices are in and through it, all gods and demigods are born of it, and so on; and its extollation of *kāla*, 'time' (xix. 53, 54), is hardly inferior. And later, in epic story, every hero is smothered in laudatory epithets and ascriptions of attributes, till all individuality is lost; every king is master of the earth; every sage does penance by thousands of years, acquires unlimited power, makes the gods tremble, and threatens the equilibrium of the universe.

But this is exceptional only in its degree. No polytheist anywhere ever made an exact distribution of his worship to all the divinities acknowledged by him. Circumstances of every kind give his devotion special direction: as locality, occupation, family tradition, chance preference. Conspicuous among "henotheists" is that assembly which "with one voice about the space of two hours cried out 'Great is Diana of the Ephesians!'"—all other gods "disappeared for a moment from its vision." The devout Catholic, even, to no small extent, has his patron saint, his image or apparition of the Virgin, as recipient of his principal homage. If thus neither monotheism nor a monocratically ordered polytheism can repress this tendency, what exaggeration of it are we not justified in expecting where such restraints are wanting? And most of all, among a people so little submissive to checks upon a soaring imagination as the Indians?

The exaggeration of the Vedic poets never tends to the denial of multiple divinity, to the distinct enthronement of one god above the rest, or to a division of the people into Indra-worshippers and Agni-worshippers and Varuṇa-worshippers and so on. The Vedic *cultus* includes and acknowledges all the gods together. Its spirit is absolutely that of the verse, curiously quoted by Müller among his proof-texts of henotheism: "Among you, O gods, there is none that is small, none that is young; you all are great indeed." That is to say, there are an indefinite number of individual (Müller prefers to call them "single") gods,

independent, equal in godhood ; and hence, each in turn capable of being exalted without stint. No one of them even arrives at supremacy in the later development of Indian religion ; for that the name Vishnu is Vedic appears to be a circumstance of no moment. But, also according to the general tendencies of developing polytheism, there come to be supreme gods in the more modern period : Vishnu, to a part of the nation ; Çiva, to another part ; Brahman, to the eclectics and harmonizers. The whole people is divided into sects, each setting at the head of the universe and specially worshipping one of these, or even one of their minor forms, as Krishna, Jagannātha, Durgā, Rāma.

Now it is to these later forms of Hindu religion, and to their correspondents elsewhere, that Müller would fain restrict the name of polytheism. To believe in many gods and in no one as of essentially superior rank to the rest is, according to him, to be a henotheist ; to believe in one supreme god, with many others that are more or less clearly his underlings and ministers, is to be a polytheist ! It seems sufficiently evident that, if the division and nomenclature were to be retained at all, the names would have to be exchanged. A pure and normal polytheism is that which is presented to us in the Veda ; it is the primitive condition of polytheism, as yet comparatively undisturbed by theosophic reflection ; when the necessity of order and gradation and a central governing authority makes itself felt, there has been taken a step in the direction of monotheism : a step that must be taken before monotheism is possible, although it may, and generally does, fail to lead to such a result.

It may be claimed, then, that henotheism, as defined and named by its inventor, is a blunder, being founded on an erroneous apprehension of facts, and really implying the reverse of what it is used to designate. To say of the Vedic religion that it is not polytheistic but henotheistic, is to mislead the unlearned public with a juggle of words. The name and the idea cannot be too rigorously excluded from all discussions of the history of religions. It is believed that they are in fact ignored by the best authorities.

After the usual vote of thanks to the authorities of the Divinity School for the hospitality shown it, the Society adjourned, to meet again in Boston, on the 24th of May next.

ADDITIONS TO THE LIBRARY.

JULY, 1878—DECEMBER, 1881.

From the American Academy of Arts and Sciences.

Proceedings of the American Academy of Arts and Sciences. Vol. xiii, 2, 3, xiv, xv, xvi. Boston, 1878-81. 8°.

From the American Antiquarian Society.

Proceedings of the American Antiquarian Society. No. 71-75, and new series vol. i, 1, 2. Worcester, 1878-81. 8°.

From the American Board of Commissioners for Foreign Missions.

Discourse commemorative of Rev. Rufus Anderson, D.D., LL.D., together with addresses at the funeral. Boston, 1880. 8°.

From the American Philosophical Society.

Transactions of the American Philosophical Society. Vol. xv, 3. Philadelphia, 1881. 4°.

Proceedings. No. 101-108. Philadelphia, 1878-81. 8°.

List of Members, 1880. 8°.

From the Asiatic Society of Bengal.

Journal of the Asiatic Society of Bengal. Vol. xxxiii-xlvi, xlvii, pt. i, no. 1; pt. ii, no. 1, 2. Calcutta, 1864-78. 8°.

Proceedings, 1865-76, 1878, i-vi. Calcutta, 1865-78. 8°.

List of periodicals and publications received in the library. Calcutta, 1878. 8°.

Bibliotheca Indica. Old Series, no. 233, 237-42; New Series, no. 287, 292, 300, 305, 307, 314, 349-50, 360-61, 364-75, 377-91, 398-447, 449-465, viz:

The Tāittiriya Sanhitā. Fasc. 28, 30, 31.

The Tāittiriya Brāhmaṇa. Fasc. 23.

The Lalita Vistara. Fasc. 6.

The same, translated by Rājendralāla Mitra. Fasc. 1.

The Mīmāṃsā Darśana. Fasc. 13-15.

Ibn Hajar's Biographical Dictionary. Fasc. 16-18.

The Āin i Akbarī. Fasc. 17-22.

The same, translated. Vol. i, 7.

The Agni Purāṇa. Fasc. 5, 10-14.

The Sāma Veda Sanhitā. Vol. iv, 2-6, v, 2-8.

The Chaturvarga Chintāmaṇi. Vol. ii, pt. i, 7-13; pt. ii, 1-12; vol. iii. pt. i, 1

The Chhandah Sūtra. Fasc. 3.

The Gobhiliya Sūtra. Fasc. 5, 7-11.

The Bhāmatī. Fasc. 4-8.

The Prithirāja Rāsau. Pt. ii, 2, 3.

The same, translated. Pt. ii, 1.

The Atharvana Upanishads. Fasc. 5.

The Maitri Upanishad. Fasc. 3.

The Muntakhab ul-Lubāb. Fasc. 19.

The Akbarnāmah. Vol. i, 7-8 and index; ii, 2-4 and index.

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Some monetary questions viewed in the light of antiquity. By Robert Noxan Toppan. Philadelphia, 1880. 8°.

From the University of Tübingen.

Zur vierten Säcularfeier der Universität Tübingen im Sommer 1877:

Festprogramm der evangelisch-theologischen Facultät: Lehrer und Unterricht an der evangelisch-theologischen Facultät von der Reformation bis zur Gegenwart, beschrieben von Carl von Weizsäcker. Tübingen, 1877. 8°.

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Festprogramm der philosophischen Facultät: Die Jubiläen der Universität Tübingen nach handschriftlichen Quellen dargestellt von Dr. Bernhard Kugler. Tübingen, 1877. 8°.

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From the Imperial Academy of Sciences of Vienna.

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Mittheilungen der k. k. geographischen Gesellschaft in Wien. Bd. xx-xxiii. Wien, 1877-80. 8°.

From Rev. William Hayes Ward, D.D., of New York.

The serpent tempter in oriental theology. By Rev. William Hayes Ward, D.D. [From the Bibliotheca Sacra for April, 1881.] 8°.

From T. Watters, Esq.

A guide to the tablets in a temple of Confucius. By T. Watters, Her Majesty's Consul for Wuhu. Shanghai, 1879. 8°.

From the Bureau of Education at Washington.

Report of the Commissioner of Education, 1877-1879. Washington, 1880-81. 8°. Circulars of information of the Bureau of Education. 1878, i, 1880, i-v, vii, 1881, i, ii. Washington. 8°.

From Prof. W. D. Whitney.

Hindu philosophy: the Sāṅkhya Kārikā of Īś'wara Kṛishṇa, an exposition of the system of Kapila, with an appendix on the Nyāya and Vais'eṣhika systems. By John Davies. London, 1881. 8°.

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Intorno agli studi del Thavenet sulla lingua algonchina, osservazioni di E. Teza. Pisa, 1880. 4°.

From Prof. S. Wells Williams.

The opium question and the northern campaigns. By Gideon Nye, Jr. Canton, 1874. 8°.

Report of the trade and customs of British Burma for the year 1872-73. Rangoon, 1873. 8°.

The Thousand Character Classic in Chinese, Japanese and Korean. MS. f°.

A Korean military order, written in Chinese, dated Nov., 1869. MS. 4°.

From the Wyoming Historical and Geological Society.

Proceedings of the Wyoming Historical and Geological Society at the annual meeting Feb. 11, 1881. Wilkes-Barre, Pa., 1881. 8°.

From Prof. Edward J. Young.

The value of the study of Hebrew for a minister. Boston, 1879. 8°.

From unknown donors.

Indian Evangelical Review. No. 16-21, April 1877-Oct. 1878. Bombay. 8°.

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Proceedings at Boston, May 24th, 1882.

The Society met as usual, in the rooms of the American Academy, at ten o'clock. The meeting was called to order by the Secretary, who explained the absence of the President, Prof. S. Wells Williams, as due to illness, consequent upon an accident sustained by him in January last, from the effects of which he was now slowly recovering. No Vice-President being present, the Secretary of the Classical Section, Prof. Goodwin, of Cambridge, was called to the chair.

After the reading and acceptance of the minutes of the last meeting, reports of the retiring officers were offered. The summary of the year's income and expenses was as follows:

RECEIPTS.

| | | | | | | |
|--------------------------------------|---|---|---|---|---|-------------------|
| Balance on hand, May 18th, 1881, | - | - | - | - | - | \$686.45 |
| Annual assessments paid in, | - | - | - | - | - | \$520.00 |
| Life membership, | - | - | - | - | - | 75.00 |
| Sale of the Journal, | - | - | - | - | - | 282.72 |
| Interest on deposit in Savings Bank, | - | - | - | - | - | 14.29 |
| Total receipts of the year, | - | - | - | - | - | 892.01 |
| | | | | | | <u>\$1,578.46</u> |

EXPENDITURES.

| | | | | | |
|--------------------------------------------------------|---|---|---|---|-------------------|
| Printing of Journal (Vols. xi., xii.) and Proceedings, | - | - | - | - | 1,223.46 |
| Expenses of Library and Correspondence, | - | - | - | - | 46.75 |
| Total expenditures of the year, | - | - | - | - | 1,270.21 |
| Balance on hand May 24th, 1882, | - | - | - | - | 308.25 |
| | | | | | <u>\$1,578.46</u> |

The amount of the Bradley type fund is now \$882.79.

The Librarian reported that the additions during the year amount to 47 volumes, 113 parts of volumes, and 52 pamphlets—chiefly the current exchanges from other societies. Those received up to December last were included in the list printed with the Proceedings for October, 1881.

The Committee of Publication stated that their expectations expressed a year ago had been realized, the twelfth volume of the Journal having been issued last summer, and the first part of the eleventh volume this spring. Work had not yet been begun upon the second half of Vol. xi., and it was impossible to say when its completion might be looked for.

The Directors announced that they had appointed the autumn

meeting to be held in New York in October next, on a day to be designated later by a Committee of Arrangements consisting of Prof. Short, Dr. Ward, and the Corresponding Secretary. Further, they had reappointed the Committee of Publication of last year. They also recommended to the Society the election to membership of the following persons:

As Honorary Members—

Prof. August Dillmann, of Berlin;
Prof. Monier Williams, of Oxford;
Mr. Alexander Wylie, of London.

As Corporate Members—

Rev. S. C. George, of Chambersburg, Pa.;
Rev. Lysander Dickerman, of Roxbury, Mass.;
Rev. J. P. Peters, of Dresden;
Mr. Henry C. Warren, of Boston.

The gentlemen thus proposed were elected without dissent.

A Nominating Committee, appointed by the Chair, proposed the re-election, without any change, of the Board of Officers of last year, and they were chosen by a unanimous vote.

The presiding officer communicated the names of the members deceased since the last annual meeting, and invited remarks upon their merits and achievements. They were:
of Corporate Members,

Mr. Gilbert Attwood, of Boston;
Mr. Ralph Waldo Emerson, of Concord, Mass.;
Rev. Samuel Johnson, of Salem, Mass.;
Prof. Theophilus Parsons, of Cambridge, Mass.;

and, of Honorary Members,

Prof. Theodor Benfey, of Göttingen;
Prof. Adalbert Kuhn, of Berlin;
Dr. John Muir, of Edinburgh.

Some account was given, by the Corresponding Secretary and others, of each one of those whose loss the Society had to deplore. Mr. Attwood was a Boston merchant, whom circumstances had led to take a special interest in the young Japanese visiting this country for purposes of education, who had rendered them signal services, gratefully acknowledged by them and their patrons, and whose interest in the Orient and in the Oriental Society, testified by him in many ways, had centred about Japan and its institutions. Mr. Johnson, for many years a studious recluse, had devoted himself to the study of the religions of the East, and had produced two volumes, the first of a projected series, one dealing with the beliefs of ancient India, the other with those of China—both highly valued, and republished in England. Prof. Parsons, the noted jurist, deceased in the fullness of advanced age, had been attracted to the work of the Society by his interest in Hindu philosophy. And we were permitted and called upon to bear our part, along with all America and the whole civilized

world, in homage to the genius and exalted character of the illustrious Emerson. More particulars were given respecting the lives and works of our deceased foreign members, who all stood in the foremost rank of those who have deserved well of their generation, and of all future time, by their labors in behalf of Oriental knowledge.

Extracts were given from the correspondence of the past half-year.

Mr. W. W. Rockhill writes from Montreux, Switzerland, enclosing copies of two Mongolian inscriptions, in the Pa-se-pa character, used during the Yuen dynasty. They were made from a transcription belonging to M. Alphonse Pinart, and have been compared with the other inscriptions heretofore published. They are in a fragmentary condition, and Mr. Rockhill is unable to give a satisfactory account of them.

Rev. L. H. Mills writes from Hannover, Germany, reporting satisfactory progress in his work upon the Gāthās (described in the Proceedings for May, 1881), and sending as a specimen nearly 300 pages (three quarters) of the first volume, of texts and translations.

Prof. Isaac H. Hall, of Philadelphia, excuses himself for being not yet ready with the history of the Arabic Bible version, undertaken by him at the request of the Directors. He reports progress on the MS. Syriac version of the New Testament in his hands, and desires to make a few corrections in his preliminary account of it, given in the Proceedings for October, 1877, as follows:

1. The statement that there were church lesson notes in the Ambrosian Peshitto codex has already been corrected (Proceedings, May, 1879).

2. The paragraph respecting Luke ix. 30, 31 proves to be erroneous, and should be cancelled. The place where that passage occurs is one of the most difficult in the whole MS. I read it in Beirut to the best of my ability, and, as I thought, with certainty; but in this country the MS. has had a long drying, and is not only in better preservation than when it left Beirut, but in most places more legible; hence, I have been enabled to correct this, with some other mistakes in the reading. The reading of the passage agrees exactly with that of White's edition.

I may also state that the change of climate has rendered decipherable some letters written in the ornament at the beginning of Luke. They read: "John the sinner, a monk, wrote [it]." The name John occurs also written in the ornament at the beginning of Mark, and probably refers to the same scribe—not to John Mark.

3. In the paragraph respecting Luke xxiv. 32, the word "Curetonian" should be substituted for "Jerusalem." The error is almost self-correcting to an expert; and I would apologize for it by saying that my books were still on their way across the Atlantic when the communication was written; and the writing was done at a hotel, with scarcely anything to refer to. Only, I had committed the same error in writing to the newspapers from Beirut, and my mind was doubtless running in the old groove.

4. Errors occur in the numbers given in the translations of the subscriptions to the Gospels. They are as follows: *a.* Subscr. to Matthew, "sections twenty and three" should read "twenty and two;" *b.* Subscr. to Mark, "miracles twenty and three" should read "miracles twenty and two;" "sections twelve" should read "sections thirteen;" *c.* Subscr. to Luke, "testimonies 72" should read "testimonies 16; and lessons 72;" *d.* Subscr. to John, "miracles nine" should read "miracles eight."

Considering the character of these mistakes, it is best to subjoin a correct table of the numbers given in the subscriptions:

| | Matthew. | Mark. | Luke. | John. |
|--------------------|----------|-------|-------|-------|
| <i>Kephalaia</i> , | 70 | 49 | 83 | 20 |
| Canons, | 360 | 240 | 348 | 232 |
| Miracles or Signs, | 25 | 22 | 22 | 8 |
| Parables, | 25 | 6 | 27 | 5 |
| Testimonies, | 32 | 17 | 16 | 15 |
| Lessons, | 74 | 40 | 72 | 48 |
| Sections, | 22 | 13 | 23 | 20 |

5. In the closing words of the subscription to Mark, the words "and for one" should probably read "and every one." The difference consists in the reading of one letter only. This in Beirût I took to be 'ee ('ain); but in this country it looks more like a *kaf*. The latter also makes the best sense, in my judgment. These two letters are easily mistaken for each other in the writing of the MSS.; and some would probably agree with my former opinion.

Communications were now called for; below are given abstracts of those presented.

1. On Early Trade Routes between Eastern and Western Asia, by Prof. Howard Osgood, of Rochester, N. Y.

Prof. Osgood traced upon the map the principal ancient routes of intercourse between the East and West, and described them and the commerce carried on upon them.*

2. On the Kushites, by Prof. C. H. Toy, of Cambridge, Mass.

After a short account of the literature of the subject followed a statement and examination of the ancient testimony as to the geographical position and the character of the Kushites:

I. The most trustworthy historical testimony places Kush in Africa, just south of Egypt. So the Egyptians, who gave the name *Kash* or *Kish* to this region, and, as far as appears, to no other; and from them, apparently, came the similar Assyrian usage. This is also the Hebrew use of the term throughout the Old Testament, except in Gen. x. (and 1 Chron. i. 9, 10) and probably in Gen. ii. (geography of Eden). The Greek geographers employ *Ethiopia* in the same sense, but sometimes include under it regions lying further west, manifestly not for ethnological reasons proper, but from external similarity of tribes. For like reasons Herodotus and others apply the name to Asiatic peoples dwelling near the Indus and the Ganges; Pomponius Mela calls these "*quodammodo Aethiopes*." The ancients seem thus to have given the name really only to the African country south of Egypt.

II. On the other hand, certain statements are supposed to show that the terms Kush and Ethiopia embraced the whole region from the Tigris or the Indus to Meroe, along the shore of the Indian Ocean, and that the Kushites were a great civilized and civilizing race.

1. The table of nations, Gen. x., appears beyond doubt to put Kushites in Arabia (Sheba, Dedan) and Mesopotamia (Nimrod). This points to some sort of knowledge or tradition—some acquaintance with tribes bearing similar names, or some belief that there were different peoples in those regions; but not necessarily to any correct ethnology. If the opinion was a very old one, the name "Kush" may have been used as loosely as the Greeks used "*Ethiopia*," for all remote southern countries. If it was comparatively modern (and there are strong reasons for referring the genealogical table to the period of the Exile), the author may have assigned these regions to Kush as the nearest of the sons of Ham, to whom alone, of the three sons of Noah, they could, in his opinion, belong.

2. Various Greek myths and legends connect "*Ethiopia*" with the Tigris

*Owing to the author's illness, no full report of the paper has been obtainable.

(Susiana), India, Palestine, and Arabia. Most of these are not found earlier than in the time of Herodotus, and have little or no ethnological value. The wildness with which they were invented and employed is illustrated by their explanations of the origin and history of the Jews (cited by Movers, Phœn. ii. 1, 23). The name "Ethiopia" in these stories is a loose geographical designation, absolutely without ethnological significance; it includes peoples, such as the tribes of northern India and of Syria, that we know to be of different races. The name Kepheneas, therefore, by which the Chaldeans are said to have been formerly called (Hellanicus), and by which the Egyptians called the Phenicians (*Kefa*), is not to be regarded as African Kushite because Kepheus is represented as king of Ethiopia. for Ethiopia need mean nothing more than southern Babylonia or southern Palestine (Joppa). 3. The alleged historical facts are not more conclusive. The name of the *Kassai* or *Kossai* of Susiana, the Kashshi of the Assyrian inscriptions, resembles *Kish*, *Kash*, *Kush*; but the resemblance may well be purely accidental, or non-ethnological. The name *Puna*, belonging to a people living in the Kash region south of Egypt, has been compared with *Punici*, *Pæni*, *Phœnix*; but it has little resemblance to the last, and nothing that we know of the Phenicians connects them with the Puna.

III. Against the hypothesis of an Asiatic Kush are some strong positive grounds. 1. Supposing the old African Kush to be represented by the modern Beja, Galla, Somali (as is generally agreed), there is no trace of their language in Asia, either in Arabia (Himyaritic), or in Mesopotamia (Sumerian-Accadian), or elsewhere; the "Kushite" element is a pure fancy. 2. They had no civilization of their own, according to the best information concerning them; and the supposition of a Kushite civilization in Arabia, formerly held firmly by eminent scholars, would now find no advocates. But it is alleged that they were the bearers of Egyptian culture eastward; that the ancient civilization of Babylonia was borrowed from Egypt. A comparison of the two civilizations will show, however, that neither could have been borrowed from the other. They were products of the same period of the world, and of sister-races, but each went its independent way; we can no more speak of borrowing between them than between the languages of the two peoples. 3. There seems to have been no time when African Kushites could have carried civilization eastward. They were themselves barbarians up to B. C. 3000 at earliest, and were not imbued with Egyptian culture before B. C. 2000, when a flourishing civilization had already existed for centuries in the region of the Tigris and Euphrates.

It appears, therefore, that the name *Kush* belongs properly only to the region lying just south of Egypt. The languages of the group of tribes represented by the Saho and Beja may with probable correctness be called Kushite or Kushic, but otherwise the term seems to have no scientific value.

3. The Cosmogonic Hymn, Rig-Veda X. 129, by Prof. W. D. Whitney, of New Haven.

The prevailing belief of the Hindus of the Vedic period as to the origin of the world is that it was made by the gods. They have no detailed and generally accepted theory of the creation, and, in the absence of a supreme divinity in their Pantheon, and the lack of consistent system among their beliefs, now one and now another of their gods is credited with the production of heaven and earth, of men and animals, and even of the other gods themselves. Here and there, however, are found signs of more advanced thought on these subjects, beginnings of the speculations which rise to greater and greater importance in the Brahmanas, the Upanishads, and the philosophical systems. The most interesting of these, and the most noted, is a hymn in the tenth or supplementary book of the Rig-Veda, evidently to be reckoned among the most modern constituents of that great collection. It has been repeatedly translated, or more or less loosely paraphrased, and accompanied with laudatory comments, often of a greatly exaggerated character. Hence a simple version and brief exposition may seem not superfluous.

The point of view of the author of the hymn is given most plainly in the two concluding verses, which, in the metre of the original, run thus:

6. Who truly knoweth? Who can here proclaim it?
Whence hither born, whence cometh this creation?
Hitherward are the gods from its creating;
Who knoweth, then, from whence it came to being?
7. This creation—from whence it came to being,
Whether it made itself, or whether not—
Who is its overseer in highest heaven.
He surely knoweth: or if he does not know?

One or two points here are questionable. In 6 c, we have the instrumental instead of the more regular ablative; hence Ludwig translates: "the gods have arrived hither by the sending of this one" (the pronoun, namely, may be masculine as well as neuter; it is not feminine, referring directly to *viṣṭi*, 'creation'). But the denial of prior existence to the gods, which is the main point, comes from either interpretation. Again, in 7 b, the subject and meaning of the verb *dadhe* are unclear; it must be either 'it set (or made) itself,' or 'he set (or made) it for himself:' i. e. the "overseer" of the next line. I have thought the former more acceptable; but whether the middle can have so pregnantly reflexive a sense admits of doubt.

To the apprehension of the poet, as is seen, the gods themselves are only a part of the present order of things, and their existence to be accounted for along with the rest, while no competent knowledge of its origination is to be expected from them. He rejects the old faith and its simple solution of the problem; to be sure, he has not so cast it out of his mind as to deny the existence of a general manager of the universe, located in the old heaven, but even his power to satisfy our curiosity is questioned. The rest of the hymn is the poet's own solution, which, after all, he is not afraid to venture to put forth, drawn from the depths of his consciousness.

In the first verse and a half, then, he attempts to depict the chaos negatively, by telling what was not then in existence. And he commits the rhetorical fault of beginning with a denial so absolute that what follows in the way of detail can only dilute it and weaken its force. Thus: 1. "Not the non-existent existed, nor did the existent exist, at that time:" i. e. in that indefinable past which preceded the present order of things there was neither existence nor non-existence. Surely, then, there can be nothing more to say about it; yet he goes on: "not the room of air existed, nor the firmament that is beyond." Then follows in the second line a series of questions (not entirely clear, since *kim* may either mean 'what' or be mere interrogative particle): "what enveloped? where? in whose protection? what was the ocean, the abyss profound?" The next verse proceeds: 2. "Not death existed, nor what is immortal, then"—a very unnecessary amplification; since if there was, as already declared, neither existence nor even non-existence, there evidently could occur no cessation of existence, nor could there be anything that prolonged an existence without cessation. Finally, "there was no distinction of night from day;" and so the negative description ends with a mere denial of the existence of light—a conception that is further enlarged upon in the fourth verse.

Now comes something positive; and it appears that there was in existence, after all, a certain indefinite It, or That, or This (for *tad* might mean any one of the three: probably "It" is our best rendering): "Breathed, without wind, by inner power, It only: than It, truly, nothing whatever else existed besides." Of course, if there is a *tad*, the attribute of existence cannot be denied it: and the poet by this time is content merely to assert that nothing except this existed (*āsa*: the verb is the same with that used at the beginning of the first verse). He deludes himself with the belief that by first denying absolutely everything, and then denying all but an indefinable something, he has bridged over the abyss between non-existence and existence, and given a start to the development of the universe. And he anthropomorphizes his "It" by making it breathe, as if a living being; though he adds, by way of saving clause, that such breathing occasioned no perceptible motion of air.

The third verse is in good part a repetition of the second, in slightly different terms. It reads thus: 3. "Darkness existed, hidden by darkness, at the begin-

ning; an undistinguished sea was this all; the void that was covered with emptiness—that alone was born by the might of fervor." The first half-verse presents a familiar and widely-spread conception; an unilluminated ocean is one of the most naturally suggested figures for the Chaos; but its inconsistency with the first verse is manifest. "A void covered (literally, as a vessel is covered with its lid) with emptiness" is a not particularly unsuccessful attempt to express the inconceivable; about as good as the old popular definition of Chaos, "a great pile of nothing, and nowhere to put it." Whether "fervor" (*tapas*), in the last quarter-verse, means physical heat or devotional ardor, penance, according to the later prevalent meaning of the word, admits of a question; but it is doubtless to be understood in the latter sense. For no such physical element as heat plays any part in the Hindu cosmogonies, while penance, the practice of religious austerities, is a constant factor in their theories. In the stories of their Brāhmaṇas, it is told times innumerable how the Creator, desiring to accomplish or attain something, performed penance (*tapo 'tapyate*), and so succeeded. It is a grossly anthropomorphic trait; yet hardly more so than that with which the next verse begins: 4. "Desire arose in the beginning upon It, which was the first seed of mind (thought, intention)." That is, since desire precedes and leads to action in man, it must have done so in the creation likewise; so *'kāmaya*, 'he felt desire,' is the introduction to most of the acts of Prajāpati, the Creator, in the Brāhmaṇas and Upanishads. The remaining line of the verse is obscure: "The sages (or poets), by devotion, found the tie of the existent in the non-existent, seeking it in the heart." The verb here is in the same tense with those used in describing the processes of creation above; and so the verse seems to project, without any preparation, certain wise persons into the midst of the nonentity or its development; if something later, within our period, were intended, the tense should be the aorist. And wherever *sat* and *asat*, 'existence and non-existence,' are brought together, it is a mere juggle of words, an affectation of profundity.

But the next verse is still more unintelligible; no one has ever succeeded in putting any sense into it, and it seems so unconnected with the rest of the hymn that its absence is heartily to be wished. A mechanical translation runs as follows: 5. "Crosswise [was] stretched out the ray (line) of them: was it forsooth below? was it forsooth above? impregnators were, greatnesses were; *svadhā* below, offering beyond." The word rendered 'offering' is literally 'forth-reaching,' and has sometimes also, as perhaps here, the signification 'straining, intentness,' which of its senses *svadhā* has in the line, I have not ventured to determine. Who the 'they' are, unless the sages of the preceding verse, it is hard to guess. The second quarter-verse gives an indication of lateness, much more important than any other in the hymn; it has protraction (*pluti*) of the final syllable of each of the two clauses, signifying a balancing of the mind between two alternatives (*mitmāṇsā*). There is no other case of it in the Rig-Veda; but half-a-dozen occur in the Atharvan, and it is by no means uncommon in the Brāhmaṇas.

The general character and value of the hymn are very clear. It is of the highest historical interest as the earliest known beginning of such speculation in India, or probably anywhere among Indo-European races. The attitude of its author and the audacity of his attempt are exceedingly noteworthy. But nothing is to be said in absolute commendation of the success of the attempt. On the contrary, it exhibits the characteristic weaknesses of all Hindu theosophy; a disposition to deal with words as if they were things, to put forth paradox and insoluble contradiction as profundity, and to get rid of anthropomorphic divinities by attributing an anthropomorphic personality to the universe itself. The unlimited praises which have been bestowed upon it, as philosophy and as poetry, are well-nigh nauseating.

At this point the Society took an hour's recess, and on assembling again, Prof. Abbot of Cambridge in the chair, continued to listen to communications.

4. A Royal Leper, by Rev. Wm. Butler, Missionary in India.

Dr. Butler gave an interesting description of a *durbar*, held by the Viceroy of India near Delhi, in 1859, of which he was himself a witness. Its object was to

honor the Maharaja of Rewah for his faithfulness to the British cause during the mutiny, and his kind hospitality and effective protection extended to English fugitives from the massacres, and to decorate him with the grand cross of a Commander of the Star of India. The Raja was himself a leper, as had been his ancestors for several generations, in spite of the devotion of one of them, who solemnly sacrificed himself in the Ganges, under the promise of the priests that it would extinguish the curse resting on his line.

5. On the doctrine of God and the Soul among the most ancient Nile-dwellers, by Prof. T. O. Paine, of Elmwood, Mass.

The word *amun* means 'hidden,' in the hieroglyphic text of the Book of the Dead (*Todt.*). When followed by the figure of God, the word is a name of God, and means 'the Hidden One.' The word *rā* means 'the Sun;' and, when followed by the determinative for God, it means God as the Sun. The two terms together, *Amun Ra*, do not mean 'the Hidden Sun,' but 'the Hidden One of the Sun.' On the cartonnage of Anchapi (*ānḫ hapi*), in the Rochester Museum, that lady is called *Osiris en Hapi Anch*, and also *Osiris Anch Hapi*: the transposition is merely ornamental; but the insertion of *en*, 'of,' is of great importance—it is almost always omitted. We thus have *Amun en Ra*, 'The Hidden One of the Sun.' Compare "Who coverest thyself with light as with a garment" (Ps. civ. 2), and "His face did shine as the sun" (Mat. xvii. 2); also Rev. i. 16; x. 1; xii. 1; xix. 17; xxi. 23; xxii. 5.

Add, Book of the Dead, 163. 9: "Oh Hidden One (God), The [*Pa*] Man [*ka*], Existing [*ḫeperr*] (God, *nuler*)." "(God)" represents the picture of God—the determinative. "Hidden One" is *amun*. Thus God is conceived of as "The Man," and as the One who "Exists," who "Is," but who is "Hidden" from human sight, as pictured by a screen covering a man like an umbrella (*ibid.* 153. 4).

Amun Ra is hence The Sun-Hidden God—God as a Self-Existing, Divine Man, inside of the Sun, and covered by it. This also is a name of God in the Future world. The Blessed Spirit (*mā ḫer*), after death, says: "I am a [as a] pure lily springing up in the meadow of God"—of *Ra*, the Sun, inside of which is God: a picture of the Sun (*rā*) is here followed by a picture of God in human form (*ibid.* 81. 2).

In the *La Trouvaille de Deir-el-Bahari*, loaned to Prof. Paine by the Rochester Museum, Queen Mākeri's body "is joined to its everlasting (*l'et*) place; united to its dwelling for ever (*neh*)—the beautiful burial of the Hidden One of Thebes" (Pl. 13). With this put: "I am living a second time after death" (*Todt.* 38. 4): "I shall not die a second time in Khernuter" (44. 4); "His soul liveth for ever (*neh*); he dieth not a second time" (153. 9).

Hence the embalmed body remained in the earth (*ta*) for ever (*neh*), while the departed man-soul lived in the future world for ever (*neh*).

Prof. Paine spoke of a late paper before the Harvard Biblical Club, in which he exhibited a picture of the soul as in a spiritual body painted blue, firmly erect, while the body of flesh, painted earth color, was in the act of dropping to the ground.

6. On M. de Harlez's Avesta, by Prof. J. Luquiens, of Auburdale, Mass.

The complete French version of the Avesta by the well-known Belgian scholar, Mgr. de Harlez, which has just appeared in a revised form (*Bibliothèque Orientale*, vol. V., Paris, 1881), and provided with an almost encyclopedical introduction, is a work of too great a scope not to deserve more than a passing recognition. Like Spiegel, his immediate predecessor, M. de Harlez seems to have aimed at reconciling the data of Eastern comments and of linguistic comparison; and, their methods being similar, their works could not differ essentially. Still, in Avestan matters, harmony does not reach very far, and leaves a wide scope to originality or divergency. M. de Harlez's stamp is clearly imprinted in all his pages; less in his many suggestions or corrections of detail than in his readiness to discuss, and fairness in reporting, divergent opinions, and in the very ruggedness of many passages which, out of sturdy adherence to his positions, he has disdained to

smooth off: indeed, scientific honesty marks out his translation among far more brilliant works.

It is to the method, however, that we would fain look for indications of a progress; though it is there, perhaps, that their want is most felt. Not but that we might point out in the author's renderings and in his notes a growing distrust of tradition. Even in his preface he asserts that his translation rests before all "upon the comparative study of the text:" which is in itself a declaration of rights. There is certainly in the texts an element of evidence which often is self-sufficient; the roots are not from an unknown stock: they bear upon their faces the familiar Indo-European stamp: oftentimes the far more definite Aryan and Vedic type is so visible that little is wanting to get at the intrinsic value of a form. It is held, then, that by pursuing the course of a root through all its meanderings in the Avesta an adequate idea of cognate words would be gained; and the more so, since the two extreme terms of the process are well set in light: namely, the root on the one side, the traditional rendering on the other; but it soon appears that M. de Harlez's conception of "a comparative study of the text" stops far short of the process just outlined, and amounts in the main only to so modifying in this or that way the specific meaning furnished by the native comments as to make it fit the several texts.

Let us take as an instance the word *draona*, found all through the many strata of the Avesta. The Pārsī tradition hands to M. de Harlez the sense 'consecrated wafer, small loaf used in sacrificial offerings;' and on this basis he establishes his comparative study: in Vendidad xiii. 129, the word must mean both simple 'bread' and 'altar-bread,' and that in the same breath, through a very unlikely play of words; in Yaçna xi., it is no longer 'bread' in any form, but an offering of meat; and again, in Yaçna xxxiii. 8, it is neither bread nor meat, but 'offering,' in the palest sense that term ever had. And for this *chassé-croisé* of meanings no voucher is adduced; for there can be no question of any peculiar fitness when we are thus led to the very singular prescription of Yasht xix. 7, that "tout le temps que (quelqu'un) gravit des montagnes, que tout ce temps il jette en morceaux un *draona*" (the loaf in question, of the size of a dollar) etc.; or to the very odd statement that the dog and the priest are alike, for both are "à petit pain." Yet the etymological clue was near at hand; the word can be connected with either of two Avestan roots only: one *dru*, 'run,' the other *dru*, 'be firm;' and between the ideas of 'course' and of 'stability' no hesitation is permitted. The oldest instance of our word is namely in one of the hymns, Yaçna xxxiii. 8, in which the singer asks "for the lasting gifts of long-life (*amertāt*) and for the stability (*draona*) of health," a fitness confirmed by the fact that another word of the same root (*dravāt*) came in the course of time to mean 'health,' too. From the abstract sense 'rest, stability,' to the concrete one 'thing fixed, laid apart for offering,' the step is easy, and nothing more is needed for an adequate rendering of all the passages concerned. It is in the old hymns, however, in the Gāthās, that the inadequacy of M. de Harlez's method is most felt: not that his rendering of them is obscure; but, like Spiegel's, it is colorless, wanting in edges and reliefs; the words follow in good order, but with a sameness which leaves no hold for either ear or eye. It is easy enough to put the finger on the fault: the presence of many *x* and *y* quantities, which tradition at bay clothed with so abstract or inaccurate a meaning as to make them inert obstructions in the drift of thought. The word *qāthra*, for instance, one of the large and dubious family of "light-words," and a factor of some moment in the older Avesta, is rendered 'brightness, brilliancy' by our writer, though he varies from this notion into that of 'glory' (Y. i. 5), and even 'felicity' (Y. xxviii. 2); in the several passages the word is a lifeless burden, except perhaps in Y. xxi. 7, thus translated: 'Celui qui a formé à l'origine ces éclats lumineux (*qāthra*) pourqu'ils se répandent dans les astres (*raocēus*), celui-là a créé par son intelligence la pureté par laquelle il soutient le bon esprit,' etc.; the sense is plausible, but the speciousness of the wording only disguises the fact that if *qāthra* is 'brilliancy of light,' so is undoubtedly the word rendered 'astres,' *raocās*; and the process of giving 'luminous brilliancy' to the 'lights' is not unlike that of carrying coals to Newcastle. In truth the frequent word *raocāo*, 'lights,' is never accompanied by any 'luminous' epithets, but generally—and this is an important clue—by the adjectives *anaghra*, 'without commencement,' and *qadhāta*, 'self-ruled' (or rather, by the natural transition from

selfness to sameness, 'never-changing, everlasting'); this notion, a favorite one in the religion of the Divine Order, is usually added to a word by the pronominal affix *qa* (*ava*), and *qūthra* is probably another immediate exponent of it. Our passage might then mean: 'He who in the beginning planned (with) for the heavenly lights that they should be clothed with lasting (self-ruled) motion, planned also the Divine Order (*asha*), for the purpose of establishing firmly the law of kindness; therefore thou must be thought (?) in mind, O Mazda, as ever the same.'

It is feasible, then, through a revision of the text in the light of comparison, to give many passages a relief they have not in current versions; whether our conception of Mazdeism will be materially changed thereby is a question which may remain open until the revision has been carried out on a large scale. The interpreter of the Avesta must remember, in any event, that tradition was formed on, but also out of, the ruins of Mazdeism, through a natural, though to us unknown, process. As this respect for the filiation of Mazdeism is a marked merit of the school to which M. de Harlez belongs, we can readily admit that, in broad lines, he has read Mazdeism correctly out of the texts, and that his tenacious advocacy of the spontaneity of that religion as against the evolution-theory is to be reckoned an eminent service to Avestan studies. This does not imply that he is averse to theorizing, nor even to theorizing with a broad sweep. When, for instance, he strives to specify, with a degree of closeness not claimed by any previous theory, the place, date, and mode of birth of Mazdeism, he treads upon purely speculative ground. In his introduction, namely, though more fully in a work often quoted there, *les Origines du Zoroastrisme*, he ascribes the genesis of Mazdeism to an influx of Jewish ideas, coinciding with the captivity of the tribes of Israel in Assyria and Media, under Salmanasar. This view is not lacking in plausibility: if Jehovism, more intense from its defeat, ever met face to face, and at close quarters, dying naturalism, the outcome cannot be a question of doubt. The argument, as drawn in the *Origines*, rests chiefly upon the presumable similarity of certain tenets common to both religions. "The four principal and characteristic features of Mazdeism," he says (*Orig.* p. 296), "are monotheism, creation *ex nihilo*, prophetism, and moral dualism." The list has certainly a Judaic sound, and as long as his argument tends to prove that the Jews cannot have borrowed it, it progresses smoothly enough; but from this easy victory it does not follow so clearly that the Iranians borrowed from the Jews: not even though M. Renan, triumphantly quoted by our writer, should say that "here the problem is reduced to knowing which nation preceded the other." In reality, these "features" are characteristic of Mazdeism in M. de Harlez's theory only, not in his version, where one might look in vain for traces of prophetism or creation *ex nihilo*. As to moral dualism, it is there, but not indeed as in Judaism, where it timidly stands on the outer edge of the system, and in a book of doubtful date; in Mazdeism it takes the foreground, and even in the earliest time pervades every stratum of thought or language; its tone is clear, almost aggressive; one might call it a national almost as much as a religious feature; and if the specious dilemma suggested by M. Renan is unavoidable, we should be compelled, on this point at least, to grant Mazdeism priority of possession. It is not so with monotheism; the very name, if used in Mazdeic theology, must at the outset be encircled with a close net of qualifications, lest the Avestan texts should turn out exegetic pitfalls. One can not deny, however, that out of several conflicting factors monotheism stood for a moment uppermost in Iran: not the full, conscious, jealous one-God-doctrine, but rather enshrouded by the last reflections of naturalism and the rising rays of dualistic conceptions; this admission leaves the problem unsolved; distant likeness proves nothing when the angles and lines in no point coincide; and no such coincidence is claimed. M. de Harlez suggests (Introd. ccv.) that the Magi did not aim at imitating, but built out of their plunder an edifice *sui generis*; but this is taking the very ground from under the argument: for if the Magi so well disguised their loans, one can no longer plead the striking likeness of the dogmas. In truth, syncretism of this kind is a philosophical phenomenon of effete times and great centres; it rises on the ruins, not on the pedestal, of national pride; and whenever it appeared, no human hand was ever so guarded, no mind so transcendent, but that here and there a word, an image, slipped in that betrayed its exotic origin. M. de Harlez refuses to the early Iranians that degree of culture needed for the setting-up of a religion, as if culture and religiousness went

abreast; and yet he ascribes to them a feat which implies a mental and literary skill such as no nation of those times could boast. If, however, we eliminate from his theory the part assigned to the Jews, that allotted to the Medes must follow, and the gates of time and space are opened wide again for the history and genesis of fire-worship. Yet as the role of the Magi in Mazdeism involves another argument, it ought to be considered in the light of its own merits.

Both native and classical tradition agree in clothing the Median tribe of the Magi with religious authority in Mazdean worship; but as both stop very far from even the earliest historical times, it is unwarrantable to suppose that that status existed from the beginning. The testimony of the texts is for early times far more trustworthy than tradition; it is chiefly negative, to be sure, but it is unbiassed, and reaches to the very farthest point of time from which we may hope to hear. Taken strictly, it proves beyond a doubt that neither Medes nor Persians had a hand in the composition of the Avesta; the language of the latter is different from that of the Persians to a certainty; from that of the Medes too, if we take for a basis of comparison a few Vedic words that have been transmitted to us. Medes and Persians are equally, as distinct nations, unknown to the writers, who exult in the name of Aryans only. Nothing indicates that the Magi had any birthright among believers, or that priestly orders were in the possession of any family or tribe; M. de Harlez sees the name of the Magi in a puzzling word (*moghu*) twice found in the later Avesta—as if the ambitious tribe of the Medes could have deemed its pride satisfied with two dubious allusions. No nation sets about composing books of the nature of the Avesta for a literary pastime, carefully avoiding to affix its mark or sign; and it is incredible that the writers of those books, if composed at a time when the two great empires of Persia and Media, not to mention the Assyrians, were waging terrific wars for supremacy, could so hush down their feelings as not to drop a single word bearing the burden of their national pride or antipathies; there were opportunities for this such as would tempt even the dullest patriot; indeed, after the numbering of Mazdean cities and lands, in the 1st chapter of the Vendidad, after the words "There are yet other places, other lands," etc., the Pehlevi translator, wondering at the silence of the Avestan writer, could not but add 'such as Persia, etc.' Think of the greatest realm in the East being indebted for a mere mention to the late hand of a Sassanid Parthian!

Again, the language of the Avesta denotes a location in the centre of an un-mixed Iranian race; everything is Aryan, from the name of the earth to that of the gods, not excepting hostile gods; not a syllable is there to suggest the proximity of any but kith and kin, until we reach the very latest strata of Mazdeic writing—which could not happen in the midst of the Sumerian or Scythian tribes of Media. The most telling argument, however, which M. de Harlez with his wonted fairness reproduces in all its force, is this: among the antagonists of the Mazdean apostle are the *Kavis* and the *Uçikhs*—that is, the singers and sacrificers with whose names the Vedas have made us familiar; "this coincidence is strange," adds M. de Harlez; it is, indeed, passing strange, and decisive as to the time as well as to the location of the older Avesta. Mazdeism was born on ground distinctively Iranian, remote from un-Aryan influences, and yet within reach of Vedism, though it be one of its farthest ramifications; this ground we may not be able to fix more definitely, but it was *not* Western Iran. It must be added that our writer, anticipating these objections, props his main theory with other incidental ones: as, that the older parts of the Avesta were written by the Magi in their western settlements, near Mouru (Merv); but this hypothesis, which assumes the existence of two, nay, three different dialects successively spoken by the Magi, is supported neither by tradition nor by the texts. So long, indeed, as the testimony of historical times is made to go abreast with that of the Avesta, there will exist a hopeless conflict between these two sources of information. The conflict is allayed, however, if, instead of being juxtaposed, they are superposed. The ascendant thread of history breaks when we reach the great contest between Medes and Persians, but it is taken up by the Avesta (barring such timid additions as we may ascribe to later writers) a little before the rise of Media, and follows, though not perhaps unbrokenly, to times not far remote from the Vedic period. It is better to admit these breaks in the annals of the Iranians than to assume a theory which neither offers the time needed for the

long fluctuations of the Mazdeic dogma, nor even satisfactorily accounts for its status at the dawn of Persian history.

It remains, in truth, to explain how Mazdeism born in Media is found exercising its sway in Persia as early as in Darius's time; it does not stand to reason that the religion of the vanquished should have easily become that of the conqueror. Both de Harlez and Darmesteter (the latter more fully in his *Introd.* to the *Vendidad*) lay great stress on that part of Persian history which culminated in the death of the false Smerdis and the elevation of Darius to the throne; they infer, namely, that Mazdeism (or rather Magism) was just then making headway in Persia, and that the Achæmenids' attitude was that of spirited patriots, who descry under religious encroachments the incoming danger of foreign usurpation. This is very plausible, but the contrary is plausible also; for there is not one of the Achæmenidan inscriptions but breathes the purest Mazdeic spirit, while the role of the Magi is so problematic that other recent writers maintain that it was the Persians who upheld the faith and that the Magi were its adversaries (Oppert). Both writers make also too much of the fact reported by Herodotus, that the Magi exposed their dead as prescribed in the *Vendidad*, while the Persians buried theirs. It is taking very narrow ground to set up as a shibboleth of Mazdeic orthodoxy a practice which was neither distinctively Iranian (since it was also current among Scythian tribes in several regions) nor generally adopted among Mazdean followers, as we know from the first chapter of the *Vendidad*. For those who believe that Mazdeism was born in the East in times far anterior to the Medic sway, and brought westward by successive migration, that its growth was slow, fluctuating according to places, times, and new influxes of ideas, they have no difficulty in admitting that what was law in one place was possibly heresy in another; but there is a more positive argument to adduce: namely, that only ages of adhesion on the part of the Persian people to Mazdeism can account for its moral status, instanced by very early documents; for if theological consistency is not a feature of Mazdeism, if even in the old hymns monotheism, dualism, and a sort of abstract polytheism elbow each other, getting successively the upper hand according as the wind blew or the writer leaned, there is no variation as to the ground-work of the faith, the healthy, pure, uncompromising principles of conduct, Iranian ethics. M. de Harlez devotes an interesting chapter of his *Introduction* to Avestan morals, quoting among others the testimony of the Greek writers in favor of the probity and veracity of the Persians; but a witness even more forcible speaks to us from the height of the Behistun rock, namely Darius, son of Hystaspes: "I have not been wicked nor a liar; I have not connived with crime, neither I nor my family; I governed in agreement with the law; I committed no violence against the just or against the virtuous!" Have we not here the best historical comment, sealed by a royal hand, on the precepts ever dear to the believers in the Divine Order, truth and humanity? We might now ask of M. de Harlez, or any writer who denies to the Persians the heir-loom of Mazdeism, how many months—or, if this be deemed trifling, how many years are reckoned necessary for a system of morals to imbue the life of a nation from the laws to the personal principles of conduct, to pervade all classes from the king to the commoners: and upon the answer to this rests the question of the previous standing of Mazdeism among Persians.

7. On the Rude Tribes of Northeastern India, by Prof. J. Avery, of Brunswick, Me.

The old province of Assam, which was coterminous with the valley of the Brahmaputra, is bordered on three sides by a rugged mountain tract, which has been, in most cases from time immemorial, the home of numerous savage tribes. The great diversity of speech among these tribes, and the primitive manners and customs which they have stubbornly retained in spite of Aryan civilization, present an interesting, but as yet little-worked, field for the linguist and anthropologist.

Beginning in the extreme east of the province, we find the settlements of the Khauntis and Singphos, the most intelligent of the Hill tribes. The former are a branch of the Shan race, and came into Assam from Burmah in the last century. The Singphos, who are allied to the rude tribes of northern Burmah, reached their present abodes at about the same time.

Following the border-land northward, we come first to the Mishmis, whose villages extend from the Namlang, a branch of the Irawaddy, to the Digam, a tributary of the Brahmaputra, or approximately between 96° – 97° $30'$ E long. and 27° $40'$ – 28° $40'$ N. lat. Next to the Mishmis, and between the Digam and Dibang rivers, is found an allied tribe calling themselves Midhis, but known to the Assamese as Crop-haired Mishmis. These two tribes are very savage, and are known only from the scanty accounts of a few venturesome travellers and occasional visits to the Assam markets.

West of the Dibang a line of tribes stretches along the foot-hills of the Himālayas as far as the confines of Bhutan. In order of location they are the Abars or Padam, Hill Miris, Daphlas, and Akas. As we approach Bhutan, the tribes show an increasing likeness to the Tibetans in features and customs. Returning to south-eastern Assam, we first enter the extensive territory of the Naga people, who are said to number not less than thirty tribes, and whose villages are found as far west as the Doyang river, or between 93° and 97° E. long. The Nagas are the most savage of all the mountain tribes, and their country has never been completely explored. Adjoining the Nagas on the west are the Mikirs and Kukis, the latter being immigrants from a large and powerful tribe lying farther south in Manipur and Kachar. The remaining border land is occupied by the Jaintias or Syntengs, the Khasias, and the Garos. These tribes probably represent the true aborigines of Assam, and have preserved marked traces of affinity to a similar population in Central India. The rude tribes, whose location we have hastily traced, differ considerably in details of physical appearance and customs, but have certain characteristics in common, only one or two of which can be noted in this abstract. Physically, they exhibit in a marked degree the type called Mongoloid—the oblique eyes, high cheek-bones, square jaws, scanty beard, and color varying from tawny yellow to dark brown. They live in long, narrow houses, one end of which is usually supported upon posts, so as to secure in their rough country a level floor with the least trouble. Many families and even a whole village sometimes crowd into one of these houses. Their skill in the arts is very limited, not all of the tribes being able to make iron implements or weave their own clothing. They practice the rude sort of agriculture known all over India as *jhum*. Each tribe is usually divided into clans, at the head of which are hereditary chiefs, whose authority is in some cases real, in others merely nominal. In the latter case the fear of private revenge is the only restraint to crime. The Abars are governed by a council of elders, who daily convene in the *morang* or town hall, and regulate the affairs of the community even to the details of daily labor. The religion of all the tribes except the Khamtis, who have embraced Buddhism, is at a rude, animistic stage, and consists chiefly in propitiating the mischievous spirits of their forests by offerings of fowls and other animals. Divination and magic are universally practiced. Traces of Aryan influence can be detected in some of their ideas of a future life. The languages of these tribes have never been carefully studied, and with exception of a grammar of Garo, a grammar and dictionary of Khasia, and a few other missionary publications, are known only by brief vocabularies. Any classification is therefore provisional. The Khamti is located with the Siamese in the Tai group; the Khasia and Jaintia form a group by themselves at present; and the other languages, or dialects, as shall appear hereafter, not less than two score in number, are classed with the Tibeto-Burman sub-family. The prevailing type of all these languages is monosyllabic with a tendency to agglutination.

8. Specimen of a List of Verbs, intended as a Supplement to his Sanskrit Grammar, by Prof. Whitney.

Prof. Whitney said that, in the present condition of Sanskrit grammar and lexicography, an account, as full as our knowledge permits, of the verbal roots of the language, with the verb-forms made from them, and their immediate or primary derivatives, cannot be considered otherwise than timely and desirable. The Sanskrit grammars of Williams and Müller, indeed, include something of this character; but it makes no pretense to completeness, and moreover takes as its basis the native grammarians, giving what these have laid down as approved for use, rather than what actually finds place in the literary records of the language.

Prof. Whitney has been for some time past engaged in preparing such an account, and he now brought a specimen, and laid it before the Society, with some account of the method followed, hoping to elicit criticism and suggestions of improvement.

The proposed plan is to give under each authenticable root all the formations from it which are thus far quotable from any part of the literature, ancient or modern, with the period of their appearance. Of course, the information on which such a statement can be founded is in the main that given in the great Petersburg Lexicon, supplemented by Böhtlingk's briefer dictionary, now in process of publication. But a great deal of independent work has also been done by the author, in the way of revising and extending the collections represented by the Lexicon. Such work must long remain incomplete, and a List like that contemplated cannot but be, at its first publication, of a provisional character, an assembling and arranging of a body of material for constant correction and additions, according to the opportunities of every scholar.

As regards the chronological periods to be recognized in the history of the language, it is intended to distinguish the Veda (by the sign v), the Brāhmaṇas (by B), the Sūtras (by S), and the Upanishads, where necessary (by U); then the epic language, of Mahābhārata and Rāmāyaṇa, which has not been brought under absolute subjection to the rules of the grammarians, needs to be held apart (by E) from the grammatically correct or classical tongue (denoted by C). There is unquestionably a certain rudeness in this classification—and especially, when all *mantra*-material shall have been gathered from *samhitā* and *brāhmaṇa* and *sūtra*, and properly arranged and examined, it will be possible to establish a *mantra*-division; but at present nothing better than what is here proposed appears to be within reach. The special works of each class may be referred to wherever there appears to be occasion for it; and in particular, much that belongs to the Rig-Veda alone will require to be so marked. Forms authorized by the grammarians, but not met with in use, may sometimes be added in brackets.

The modes of formation of the present-system are marked according to the order followed in the author's grammar, the conjugation class-number of the Hindu grammar being added in brackets. The numbering of the aorist-formations is according to the former authority only.

The form given as specimen of a tense-system is regularly in the third person; but if only isolated forms are met with, they are set down as they occur.

Among the primary derivatives, it is best to put not only those really deserving the name, but also those which, though properly secondary, have won in the history of the language the position and value of primary words. Such are especially the gerundives in *ya*, *tavya*, and *aniya*, with the words in *aka* and *uka* and *in* etc. Formations by primary suffixes from secondary conjugation-stems are put last.

A few examples follow:

✓ *āp*, 'obtain.'

Pres. IV. [5]. *āpnóti* etc. AV. +, *āpnute* E.—VI. [1]. [*āpatī*]

Perf. *āpa* etc. V. +, *āpiré* RV.

Aor. 1. *āpi* C.—2. *āpat* etc. V. + (*apoyam* AV.).—3. *āpīpan* CB. (*īpīpat* BAU.).—4. *āpsis* E.

Fut. *āpsyati* -te etc. B. +.—[*āptā*].

Verbals. *āptā* V. +; *āptum*, *āptvā*, -*āpya* B. +.

Sec. Conj.: Pass. *āpyáte* etc. B. +.—Desid. *īpsati* etc. AV. +, *īpsate* E. (*apsanta* RV.).—Caus. *āpayati* etc. B. +, -te E.; *āpipayīṣet* CB.

Deriv. *āpas* *apās* V.B., *āpnas* RV., *āpnavāna* RV.; -*āpa* B. +, -*āpaka* E. +, *āpya* V. +, -*āpin* C., *āpana* V. +, *āpaniya* C. (*āpaneya* KU.), *āpas* RV., *āpi* V., *āpti* AV. +, *āptavya* C., -*āptṛ* C., *āpnāna* (?) RV.; *īpsā* E. +, *īpsin* U., *īpsu* S. +; *āpitavya* U., *āpayitr* U.; *āpipayīṣu* E.

✓ *tap*, 'heat.'

Pres. VI. [1]. *tāpati* -te etc. V. +.—VIII. [4]. *tāpyati* (see Pass.).

Perf. *tatāpa* *tépé* etc. V. + (*tatāpate* RV.).

Aor. 1. *átāpi* RV.—3. *atīpat* E., -*pe* RV.—4. *tāpsit* S., *tāptam* B.S., *átapthās* (?) AV.

Fut. *tapsyati* -te etc. E., *atapsyat* E.; *tāpīsyati* E.—*tāptā* E.

Verbals. *taptá* v. +. *tapita* E.; *taptum*, *taptvā*, *-tāpya* v. +.

Sec. Conj.: Pass. *tāpyāte* v., *tāpyate* B. +, *tāpyati* B. +.—Intens. *tātap-yate* E.—Desid. [*tāpaysati -te*].—Caus. *tāpayati -te* AV. +; *tāpyate*.

Deriv. *-tap* RV., *-tapa* E. +, *tapya* E. +, *tāpāna* v. +, *tapanā* B., *tapanī* RV., *tāpas* v. +, *tāpīṣṇu* E., *tāpīṣṭha* v., *tāpiyas* C., *tāpu* RV., *tāpus* v., *tāpti* C., *tāptavya* C., *tāptiṣ* RV. E., *tāpa* AV. +, *tāpaka* C., *tāpin* C., *tāpya* C., *tāpāna* E. +; *tāpyatū* RV.; *tāpayitr* C., *tāpayiṣṇu* RV.

✓ *budh*, 'know.'

Pres. VI. [1]. *bódhati -te* etc. v. +.—VIII. [4]. *budhyati* etc. E. +, *búdh-yate* etc. v. +.

Perf. *bubódha* *bubudhe* etc. v. + (*búbodhati* etc. RV.).

Aor. 1. *abudhran -ram* RV.; *bodhī* impv. RV.; *ábodhi* v.; *budhānā* RV.—2. *budhānta* RV., *budhēma* (?) AV.—3. *ábubudhat* v.—4. *ábhutai* etc. v., *abuddha* C.—5. *bodhiṣat* RV.

Fut. *bhotsyati* etc. B., *-te* E.

Verbals. *buddhá* v. +; *boddhum* E. +, *buddhvā* E. +, *-búdhya* RV. +; *budhí* RV.

Sec. Conj.: Intens. *bobudhīti* C.—Desid. *bubhutsati* C.—Caus. *bodháyati* v. +, *-te* B. + (*abodhiṣata* C.), *bodhyate* E., *bubodhayiṣa-* (in deriv.) C.

Deriv. *-budh* v. U., *budha* B. +, *-budhya* RV., *buddhi* s. +; *bodhá* v. +, *bodhaka* C., *bodhin* C., *bodhya* C., *bódhana* v. +, *bodhaniya* E. +, *bodhi* C., *bodhit* RV., *boddhavya* U. +, *bodhitavya* C., *boddhī* U. +; *bubhutsā* E. +, *bubhutsu* E. +, *bodhayitr* RV. +, *bodhayitavya* C., *bodhayiṣṇu* E., *bubodhayiṣu* E. + (*bubodhayiṣu* B.).

The author's collection and arrangement of material being not yet finished, the above details do not claim at all points the degree of accuracy attainable; but they will illustrate sufficiently, it is believed, the general scope and method of the undertaking. It is hoped that the List will be published within a year.

9. Further Studies among the Metres of the Rig-Veda, by Mr. W. Haskell, of New Haven; presented by the Corresponding Secretary.

In continuance of his examination of the Vedic metres reported a year ago, Dr. Haskell gives more detailed statements with regard to the *anuṣṭubh* and *gāyatrī* stanzas.

The Rig-Veda has 794 *anuṣṭubh* and 2435 *gāyatrī* verses, distributed as follows:

| | an. | gāy. | | an. | gāy. |
|---------|-----|------|-------|-----|------|
| Book I. | 107 | 469 | VI. | 45 | 134 |
| II. | 14 | 37 | VII. | 4 | 60 |
| III. | 22 | 104 | VIII. | 112 | 734 |
| IV. | 26 | 112 | IX. | 49 | 599 |
| V. | 156 | 79 | X. | 259 | 107 |

Taking all the *anuṣṭubh* verses in Book I. as instancing the general structure of the metre, we find the distribution of light and heavy syllables (leaving out, here as later, a few doubtful ones) in all the four *pādas* to be this:

| syllables | i. | ii. | iii. | iv. | v. | vi. | vii. | viii. |
|-----------|-----|-----|------|-----|-----|-----|------|-------|
| light | 193 | 96 | 166 | 85 | 389 | 30 | 403 | 288 |
| heavy | 231 | 327 | 257 | 336 | 33 | 392 | 21 | 142 |

There is no noteworthy difference between the different *pādas* as regards their structure. The cadence — — — is found in 88 per cent. of all the *pādas*, a light syllable being about twice as common as a heavy at the end of the *pāda* (58 to 30 per cent.). In the remaining 12 per cent. (50 *pādas*) is found every variety of combination; in a few cases even the penultimate syllable is heavy. In the first half of the *pāda*, the combination — — — is more frequent than any other (21 per cent.); the combination — — — is decidedly less common (16 per cent.); the formula — — — will satisfy over 63 per cent. of the cases.

About 25 *pādas*, in all the Books, are defective, or not to be filled out by any of the ordinary resolutions; 10 are redundant. Book X. has several *pādas* (7)

that are entirely made up of heavy syllables. There are no *anustubh* hymns with trochaic (or spondaic) cadence, and even two such pādas succeed one another in only 9 scattered verses. When *o* from *as* occurs before *a* in the cadence of the verse, it is usually to be scanned as light (the only exceptions are at viii.55.15; ix. 98.3; x. 159.1). Syllables like the initial *a* of *asia* for *asya* always occur in cadence where they ought to be heavy (in ix. 66.18, the cadence may be regarded as trochaic). Cases where final *n* is doubled before an initial vowel are rare in *anustubh* cadence; but the syllable appears to count as a heavy one in a great majority (three-quarters) of cases in all metres.

Again, for the *gāyatrī*, taking as example all the verses of this metre in Book I., the distribution of quantities throughout the pādas appears to be this:

| syllables | i. | ii. | iii. | iv. | v. | vi. | vii. | viii. |
|-----------|-----|------|------|------|------|------|------|-------|
| light | 638 | 304 | 473 | 245 | 1302 | 127 | 1307 | 888 |
| heavy | 754 | 1088 | 919 | 1147 | 90 | 1265 | 85 | 504 |

The predominance of heavy syllables in the first half of the pāda is even more marked here than in the *anustubh* metre; by combining the percentages, the norm — — — — — has a value of nearly 78 per cent. for all the syllables; and — — — — — of over 88 per cent.; the cadence — — — actually occurs in 86 per cent.; and the remainder are again of the most heterogeneous character. Hardly any (less than half-a-dozen) unmanageably defective pādas are found, and not many more (7) redundant ones.

But besides not a few detached pādas, and even stanzas, scattered through all the books, certain passages have the cadence wholly or predominantly trochaic or spondaic: they are, as noticed, viii. 2. 1-27, 29-41; 7.30, 32-5; 16. 1-12; 71. 1-9; 79. 1-8; 81. 1-9; ix. 66. 16-20; x. 20. 4-8; 185. 1-3. The estimate made of their quantities is as follows:

| syllables | i. | ii. | iii. | iv. | v. | vi. | vii. | viii. |
|-----------|-----|-----|------|-----|-----|-----|------|-------|
| light | 113 | 65 | 101 | 69 | 130 | 170 | 56 | 199 |
| heavy | 166 | 213 | 177 | 209 | 145 | 100 | 220 | 77 |

By combining the percentages of the several syllables, the norm — — — — — is found to be represented by 79 per cent. of the syllables, the proportion being very nearly the same in each of the three pādas. But the number of pādas which actually exhibit the full trochaic cadence — — — is only 85, about a third of the whole number. The irregularity of structure is decidedly greater among these verses than among the more usual *gāyatrīs*; and it seems quite doubtful whether the Vedic poets can be said to have formed and realized the conception of a trochaic verse.

The scattered pādas with trochaic or spondaic cadence number about 100, and an analysis of their structure yields results almost identical with those just given.

10. The Middle Pathway between the Orient and Occident—will it now be opened anew and made safe? by Prof. J. W. Jenks, of Newtonville, Mass.

The author being obliged to leave before his paper was reached, it was presented and read in part by the Corresponding Secretary. Prof. Jenks reviews the position and recent activity of the European rivals in Asia, namely England and Russia, notes the distance separating their respective outposts, and the terminations of the avenues for trade and peaceful intercourse established by them, and the character of the countries and races that lie between. He gives an itinerary of the inland route from the eastern border of Europe to and across Afghanistan, entering India by Peshawur, and calculates the chances for its recovering its ancient peaceful state. "where once, according to tradition, in times we are apt to look upon as only filled with barbarous violence, a solitary peddler could travel, night or day, with his pack on his back, unmolested"—but arrives at no satisfactory and confident solution of the question.

The Society, after passing the usual vote of thanks to the American Academy for the use of its room, then adjourned, to meet again in New York in October next.

Proceedings at New York, October 25th and 26th, 1882.

The Society met at 3 o'clock P. M., in Room No. 23 (Prof. Short's) of Columbia College. In the absence of the President and Vice-Presidents, Prof. Charles Short of Columbia College was called to the chair, and presided at the meetings of Wednesday afternoon and evening. The Corresponding Secretary explained on behalf of the President, Prof. Williams, that, though steadily gaining in health, he was not yet sufficiently restored to bear the fatigue and excitement of the sessions.

After the reading of the minutes of the last meeting and the settlement of the order of the present one, it was announced on the part of the Directors that the Annual meeting for 1883 would be held in Boston, as usual, and on Wednesday, May 23d; Professors Abbot and Toy would act as a Committee of Arrangements for it.

The following persons were then elected Corporate Members:

Mr. G. Wetmore Colles, of Morristown, N. J.;
Prof. David G. Lyon, of Cambridge, Mass.;
Prof. Thomas R. Price, of New York City.

A very brief summary of the correspondence of the past half-year was given by the Secretary.

Rev. L. H. Mills sends from Hanover an account of the progress of his work on the Gāthās, noticed in previous issues of the Proceedings. He hopes to have a volume ready to appear in a few months.

Prof. C. de Harlez, of Louvain, regarding himself as unfairly treated in a criticism of his work by Prof. Luquiens, published in the Proceedings for May of this year, had sent for distribution to members present at the meeting extra copies of a reply to the criticism, communicated by him to the Louvain "Muséon." These were laid upon the table for members to take, and the Secretary gave notice that he had in his hands a brief rejoinder by Prof. Luquiens, which would be read at a later session (see below).

Communications were now presented, as follows:

1. On Words for Color in the Rig-Veda, by Mr. E. W. Hopkins, of Columbia College, New York.

Geiger's article on color in the Rig-Veda is the only work of authority on this subject. The purpose of the present paper is to see if the facts set forth in that article be correct, to give a more detailed discussion of the color-words, and finally to investigate the theory on which the belief in a gradually developed color-sense in man is founded.

The great mass of color-words in the Rig-Veda indicate colors which cannot be referred to any one invariable standard, but which express the lighter shades of red and yellow, or reddish-yellow. The word *hari* and *harita*, which means literally the 'burn-color' (from *√ghar*), is used generally to indicate 'yellow;' but it cannot be proved that the meaning 'green' is unknown to this word in the Rig-Veda. In the later literature the word meant 'green' and 'yellow' both; and something of the same sort may be assumed for the Rig-Veda, when we find the earth called *pr̥thivī harivarpas* (iii. 44. 3), or the frog (vii. 103. 6) called *harita*. The meaning 'green' is not proved for these passages, but cannot be disproved: a fact which should have some weight when applied as an argument to a theory which, like the development theory, rests on wholly negative data. The word for 'blue,' *nila*, which in the later language may mean 'blue' without any idea of darkness combined with it, has been assumed by Geiger to mean in the Rig-Veda only 'grey' or 'dark-brown.' But in the discussion of this word Geiger fails to note that, whereas the meaning 'dark-brown' might possibly suit one or two passages, it is impossible to assume such a meaning for every case: for instance, viii. 19. 31, where the first sparks (or dark-blue flames?) of the newly-lighted fire have the adjective *nilavant* applied to them. So, too, the same adjective, when applied to the *hansa*, may mean 'dark-blue;' at any rate, Geiger has not proved that the blue tone of this adjective, which was later so general, is entirely foreign to the Rik, but only that, from the few passages where it is used, it might be made to correspond to 'dark-brown' in order to suit his theory.

Before discussing the development-theory as applied to the Rig-Veda, the same process of reasoning was applied to Milton's Paradise Lost, and in detail to the Nibelungen-Lied. It was shown that these poems exhibit the same comparative use of color-words as Homer and (if we took all Geiger's statements as proved) the Rig-Veda. From this the conclusion was drawn that simple mention or non-mention of color was no proof either of a lack of development of color-sense, or of a lack of proper terms to express color. Good reasons exist why we do not find green and blue mentioned as we find red and yellow in the Rig-Veda. A statistical survey of the use of words for grass, meadow, fields, etc., in the Rig-Veda shows that such words were merely introduced as an accident of the thought. No description is given in any way. It is therefore misleading when Geiger speaks of fields, trees, etc., being so often described, and yet not called green. They are not "often described;" and when a rare epithet occurs, it is one of utility, almost never of beauty. Therefore the lack of description extends over the color together with the other attractions of these natural products. What was not useful was not regarded. In the same way it is an error to say that the firmament is frequently spoken of but not called blue. The firmament is rarely alluded to. What is described is the lower heaven, the clouds, the sunrise, the lightning. On these phenomena of nature the whole burden of epithets rests. But these all give no opportunity for the use of 'blue.' Red and yellow would naturally be the foremost colors. It was these glaring colors that accompanied the deities, and it was the object of the hymns to worship these deities by describing their phenomenal appearance. Beauty for its own sake was not admired or described. Therefore the Vedic singers did not pass in their descriptions out of the light-colored three-fold heaven of glaring light, except in an occasional chance allusion to the *nākasya pr̥stham*, the round-backed firmament that shut in the lower sky. As on earth, need and not beauty gives the impulse to the hymn. It seems to be more a defective development of esthetic appreciation for the beautiful in itself than a defective development of the human retina that causes the scarcity of words for green and blue in the early literatures.

2. Syriac Miscellanies, by Prof. Isaac H. Hall, of Philadelphia.

The Chronicle of Joshua the Stylite, of Edessa, has been elegantly edited, with an elegant translation, a good index, and maps, by Professor William Wright of Cambridge. It has long been known as an important source of history, in its abridged Latin translation by Joseph Simon Assemani, pp. 262-283 of the first volume of his *Bibliotheca Orientalis*. The first complete edition of the Syriac text appeared in 1876, edited for the *Deutsche Morgenländische Gesellschaft*, in their *Abhandlungen*, Band vi., No. I., *Chronique de Josué le Stylite, écrite vers l'an 515*,

texte et traduction par M. l'abbé Paulin Martin. Wright's edition is provided with excellent foot-notes, explaining all his emendations of the MS. The date of the Chronicle appears to be A. D. 507, and it is preserved in a MS. written at some time between A. D. 907 and 944, being incorporated into the larger work of Dionysius of Tell Mahré, patriarch of the Jacobites (*ob.* A. D. 805). The only MS. of the work is preserved in the Vatican Library. The reason for mentioning this work here is to note that it supplies documentary testimony, almost as ancient as any we have, for the numbering now in use of the Hebrew Psalms. In chapter xxxiv. of the Chronicle, according to Wright's numbering, is a mention of the "eighteenth Psalm," which the context shows to be the same as that known in the Hebrew and English by the same number. The whole context, also, looks as if the passage could not have been altered at all, but preserves the original form of the Chronicle. So, at all events, we have a testimony to this numbering which goes back to the early part of the tenth century; and, in all probability, to the beginning of the sixth. It is to be remembered, also, that the Syriac service books do not cite the Psalms by number, but by the opening words of a section.

Attention was also called to the well-known possibility of a change from γ to η , or the reverse, in Hebrew; and the like in Syriac. If actual examples of this change can be shown, it might tend to acquit the critics of too great rashness, when they think they detect it by a reasonable conjecture. In Syriac, the change is very rare, yet it is now and then made by an individual scribe. But one case appears in Luke xxiv. 32 (treated of in the Proceedings for October, 1880), where the Curetonian, Peshitto, and Harclean have all adopted an erroneous change from β to η . The error not only occurs in the MSS., but has passed into many of the printed editions, including some of the best of them. Another case appears in 2 Corinthians iv. 18, where $\beta\alpha\beta\alpha$, *σκοπούντων ἡμῶν*, has been changed in many MSS. and editions to $\beta\eta\beta\eta$, 'we rejoicing;' which makes good sense, though of course it is wrong. The latter, erroneous reading is that of the oldest and the latest printed editions, and of all the MSS. I have examined. The *variae lectiones* of the printed editions do not inform us whether the correction, as it stands in sundry printed editions, rests upon MS. authority or upon conjecture only.

Another apparent instance of the change of one letter for another appears in Mark xiv. 33, in the Peshitto rendering of *ἐκθαμβεῖσθαι καὶ ὑδμονεῖν*; which is precisely the same as that for *λυπεῖσθαι καὶ ὑδμονεῖν* in Matthew xxvi. 37. For the first word in each of these phrases the Peshitto has $\beta\eta\beta\eta$, which very well renders *λυπεῖσθαι*, but not *ἐκθαμβεῖσθαι*. For the latter, the Syriac requires a β in place of the η . The change might easily be made in most Syriac MS. alphabets by simply omitting the diacritic point; as otherwise the two letters are easily mistaken for each other. I do not find that any printed edition or MS. has the right letter.

All these are manifest historic instances of the general change of letter, and of a general acceptance of the wrong one. It ought not to frighten us, therefore, when a conscientious critic offers a reasonable conjecture based on the assumption of a similar change, though it cannot, from the nature of the facts apparent, be either proved or disproved historically.

Several examples of the sort occur in the Apocalypse; but as all the printed copies rest upon one MS. only, it would hardly be fair to insist upon them in this connection.

The spelling of the word *Peshitto*, as the name of the chief Syriac version of the Bible, varies greatly among different writers; and some remark thereupon seemed called for, not as news for Orientalists, but for the benefit of those who have not the facts under their eyes. As to the fixed points of the orthography, the *e* represents the Oriental *sh'ua*, and may be represented by an *e*, an *u* (superior, as the printers say), or an apostrophe (*'*), according to the preference of the transliterator. The *i* is the long vowel, and may be written with a makron or circumflex (*ī* or *î*), or left unaccented. The *o* represents the Western Syriac pronunciation, chiefly Maronite; but may be replaced by an *a*, representing the Eastern pronunciation, of the Jacobites and Nestorians (the latter call themselves Chaldeans, and abhor

the name of Nestorians). However, the Syriac written vowel is the same in both cases.

As to the points of variation, the *sh* represents simply the consonant *shin*; and it is absurd for any one but a German to transliterate with *sch*, as is often done by ill-informed writers. The chief point refers to the *t*; for which many write only *t*, and some *th*. The fact is that the word, in this use, is a feminine adjective, agreeing with one of several nouns which severally stand for 'editio' (in the old Latin sense, when applied to books), for 'version,' or 'copy,' or for 'portion of Scripture.' The oldest term comes down to us from Gregory Bar Hebraeus (13th century), in the preface to his *Thesaurus Arcanorum*. It is there

ܐܕܝܬܐ ܐܝܬܐ, 'editio simplex'; the word *editio* bearing the meaning just above stated. Some would render *versio simplex*; but that is scarcely correct. Another term, modern and still in use, may be seen, for example, in the American Bible Society's edition of the Syriac New Testament (a reprint of that of Justin Perkins, Urmia, 1846), New York, 1874. At the beginning, each, of 2 Peter, 2 and 3 John, Jude, and the Apocalypse, is a note, stating that the book is not in the

ܐܬܬܐ that is called ܐܬܬܐ; but is written in other ancient ܐܬܬܐ. The word ܐܬܬܐ means here either 'copy' or 'work,' or, substantially, 'version.' It is a derivative from a word which furnishes the common name for the modern chapters in the Arabic Bible, and the ancient sections of the Syriac Bible. The verbal form from which it is immediately derived seems to mean to elaborate, sometimes to collate and correct, a book.

Thus, in any event, the two *t*'s seemed called for; the first being a *teth*, the second a *tau*. Accordingly, *tt* is correct enough for ordinary purposes; *tt* for more accurate purposes; while *th* is altogether unobjectionable. It should here be stated, however, that the Western Syrians no longer pronounce the *tau* as an English *th* in any case. It is always the simple *t* with them. The Eastern Syrians still pronounce the *tau* like our *th* (in *thin*), in certain cases. But the single *t* can be used by one informed of the facts only in mere deference to a supposed English usage, which is now abandoned by most scholars.

The sum is, therefore, that *Peshitto* or *Peshitta* is practically near enough for ordinary English; while *Peshito* is wrong, and *Peschito* is unworthy of any one who writes English. If the Germans did not make two consonants out of *sh*, and if *sch* were not a single consonant with them, we might—use the suppositions as we liked. But their necessities of transliteration should be no pattern for us. Until we are ready to abandon our perfect transliteration of *Jebel* for the awkward German *Daschebel*, we ought not to yield our better *sh* for their misleading *sch*. Misleading, for many respectable students often mistake it for *skh*: that is, *s* followed by the guttural *kh*.

Concerning the meaning of the name *Peshitto*, nothing is more common than for tirots to explain it as signifying 'literal'; but that seems to be a mistake. That explanation is by some said to distinguish the *Peshitto* Old Testament from the Jewish targums (which were not used by the Syrian Christians); or else, from the one made simply from the Hebrew, in distinction from the Hexaplar, made from the Septuagint, by Paul of Tela, at Alexandria, A. D. 616. As to the New Testament, no version less 'literal' is put forth in the way of contrast, by those who urge the meaning 'literal.' In fact, neither of these meanings has sound foundation in fact; for the *Peshitto* is the least 'literal' of the versions; and the 'simple' manner of making is an idea which no Syriac scholar could entertain; for it requires ideas to be put into the word which it does not have in Syriac.

The word *Peshitto* appears sometimes to be applied to the Old Testament, whence it has been inferred that the name was first given to the latter, and then to that version of the New Testament which commonly accompanied it. But whether that be the case or not, the only versions of the New Testament common among the Syrians were the Philoxenian and Harklean. So that, at all events, the name *Peshitto* only distinguished that version from the Syriac Hexaplar of the Old Testament, and the Philoxenian and Harklean of the New Testament. Accordingly, we should not expect to meet the name before the seventh century, the date of the Hexaplar and Philoxenian; and, in fact, we do not find it till

much later: at the earliest, in the ninth century; and the first clear statement is that of Gregory Bar Hebræus, above referred to.

Now for the facts. The Peshitto is a wonderful version; mostly literal, but always idiomatic, always Syriacizing, never Grecizing; never shunning a paraphrase, but often inserting a paraphrase of mere explanation. Its genius much resembles that of Luther's German Bible, which is far less literal than most modern versions, yet magnificent in its German reproduction of the sense and spirit of the original. On the other hand, the Hexaplar, the Philoxenian, and the Harclean, were slavishly literal, keeping the Greek idiom and order of words, and even sometimes reproducing Greek inflexions of proper names and transferred words. Every one of them was a far more literal version than the Peshitto; and no Syrian scholar could fail to know it.

Moreover, the Hexaplar was founded on the LXX. of Origen's Hexapla; and both it and the pair of New Testament versions, viz. the Philoxenian and Harclean, were crowded with the asterisks and *obeli* of the Origenistic MSS. Besides this, the Philoxenian and Harclean had a margin of annotations, sometimes giving the words of the Greek original in Greek, sometimes the same transliterated into Syriac; besides other matter of explanation and comment, almost entirely critical. The MS. on which White's edition of the Harclean is founded contains in the margin the alternative ending of Mark's Gospel, found otherwise in the Greek uncial Codex L. In short, these versions were critical, annotated works, for the use of the learned; and could scarcely be appreciated to the fullest extent except by those familiar with the Greek. In contrast with these, the Peshitto presented only the clear, simple, or single (that is what *Peshitto* often means, when we say it means simple) text, uninvolved by textual marks or marginal notes. Now, to turn back to our oldest accessible authority, Gregory Bar Hebræus, we find that he states the Peshitto, "which is conformed to the Hebrew text," to be the basis of his comments, and only mentions the LXX., with the Greek versions of Aquila, Symmachus, Theodotion, etc., as the source of some of his illustrations. But he does not give any meaning to the name *Peshitto*. And he only speaks of the Peshitto New Testament by way of noting the date of its supposed making, stating that it was translated after the same Peshitto pattern as the Old Testament. The word which I render here by 'the same pattern' is one of the untranslatables. All it means is, the New Testament portion of the same thing. Gregory Bar Hebræus does not at all explain the word *Peshitto*; but he mentions, in contrast with it, the Philoxenian, the Harclean, and the Hexaplar. And the difference above stated between those and the Peshitto would be entirely evident to him. He would never have said that the Peshitto was more literal than the others; nor do any of his words bear the meaning—nor could they bear the meaning—that the name refers to a rendering from the original texts. Moreover, that would not distinguish it from the other Syriac versions of the New Testament; and it is only at the close that he speaks of the Hexaplar.

It is plain, from what he does say, that those who have supposed that he defined it as Peshitto because it was made from the Hebrew and Greek have committed a double error; first, of having failed to read for themselves, and consequently of mistaking his mention of Greek for Syriac versions. A misunderstanding of Wiseman's "*eadem simplici forma*" (*Horæ Syr.*, p. 90), as a translation of what I have called untranslatable, has been the second error. Wiseman's note (*idem*, p. 89) shows that he did not himself misunderstand it.

It is, however, but fair to state that those who think the 'literal' character of the translation gave the name to the Peshitto have some color for their opinion from Pococke's translation of the words of the Arabic historian Abulfaraj. That speaks of the Syriac version, "*quod simplex vocant, quod in ejus versione elegantia ratio habita non sit.*" But this statement is quite contrary to fact, and cannot be accepted. It is not to be supposed that the Syrians would be guilty of such a *lucus a non* in a matter so grave; while the Arabian historian would follow the instincts of his profession in all the ages, and manufacture an explanation to order without scruple.

3. On Differences of Use in Present-Systems from the same Root in the Veda, by Prof. M. Bloomfield, of Baltimore, Md.

Prof. Bloomfield began with pointing out the importance, both to Sanskrit grammar and to general Indo-European grammar, of the question whether there are to be discovered in the earliest Veda any traces of a difference of use, functional or dialectic, among the present-stems—often two or three, and sometimes numerous—found to occur there from the same root. He reviewed some of the leading facts in the case: the (including intensives) dozen or more present-stems of the root *ṭṛ* (*kar-tir-tur*); the six from *pi-pyā*; the five from *iṣ*, *kū*, and others; and so on. A part of these formations are evident results of transition from one system to another, brought about by some form or forms derivable from more than one stem. In other cases, an isolated present-form is due to the influence of a similar formation from some other root occurring along with it. Yet it must be granted that, in all the languages of the family, the same root not infrequently makes present-stems with different formative elements. We might naturally look to find the cause of this either 1. in an original functional difference of the various formations—a variety of temporal or modal use; of causal, factitive, continuative, intransitive use, or the like—or, 2. in the dialectic or stylistic habit of different localities or literary compositions. Prof. Bloomfield's paper presented the results, mainly negative, of a search through the Rig-Veda for differences of these two kinds.

Delbrück is the scholar who has given this subject most attention, in his *Grundlagen der griechischen Syntax* (Halle, 1879). The main result which he claims concerns the root-present. This, he assumes (p. 112), was originally the present of incipient action (*das Präsens der eintretenden Handlung*), basing his view upon another supposition: namely, that the root-aorist was originally the preterit of the root-present. As for the other present-formations, he regards it as extremely probable that to every one of them there was once attached a delicately differentiated meaning, too delicate to be taken hold of by our linguistic sense. Accordingly, in another passage (p. 100), he says: "The oldest Sanskrit shows that in the case of many roots there existed several present-formations. So there are found from root *bhṛ* the three, *bhṛti*, *bhṛati*, and *bibharti*. A difference of function we do not feel here any longer; but it is to be assumed that it did once exist. It may be assumed in addition that *bhṛti* indicated momentary action, *bhṛati* continuous action, and *bibharti* repeated action." But the root *bhṛ* is almost unique in showing a distinct functional difference between its two stems *bhṛa* and *bibhar*: the former being, in the terminology of Slavic grammar, "perfective," regularly followed by the dative and best rendered by 'convey,' while the "imperfective" *bibhar* is used without the dative, and means 'support.' Typical examples are *bhṛa gr̥ṇatē vāsūni*, 'bring good things to the singer' (RV. ix. 69. 10); and *vāsu bibhārsi hās'ayos*, 'thou bearest wealth in thy hands' (RV. i. 55. 8). Further examples for the perfective *bhara* are RV. x. 94. 1; v. 1. 10; ii. 14. 8; AV. ix. 3. 24; x. 8. 15; iii. 15. 8: for the imperfective *bibhar*, RV. x. 32. 9; vi. 53. 8; i. 39. 10; x. 69. 10; etc. etc.; AV. xii. 1. 15; ii. 4. 1; ix. 4. 6; etc. etc. The stem *bhar* occurs only twice, and is also imperfective.

This important functional difference naturally suggests further investigation on the same line. Accordingly, all reduplicated presents in RV. have been looked through and compared with the other present-systems from the same roots; but without any positive results. Examples are as follows: From root *sac*, present-stems *sisac*, *sāra*, *sāce*, *saṇce*; no perceptible difference between them: examples, RV. ix. 84. 2; viii. 5. 2; x. 27. 19; ii. 22. 1; vii. 5. 4; i. 101. 3. From root *ṛt*, stems *carart*, *vārtā*, *vart*: in forty passages examined, no other difference than that of transitive and intransitive, which is pretty regularly (though not precisely) distributed between active and middle forms; examples of intransitive use are RV. iii. 61. 3; x. 117. 5; viii. 6. 38 (*vartti*; only case); of transitive, RV. x. 26. 8; vii. 36. 4. From roots *gam* and *gū*: no differentiation of meaning among all the different forms (the discussion of whose character, and distinction of present from perfect and aorist, is difficult, and would require too much space here). It is especially disappointing to us that no specialization of meaning appears in the stem *gācha*, no inchoative sense as in the Greek *βάσκ' ἴθι*. So in the Homeric *μακρὰ βύβας*, 'making long strides,' is seen an intensive or frequentative meaning of the

reduplicated form, which is wanting in Vedic *jigā*. From the root *tṛ*, whose especially numerous present-stems were noticed above, the formations in the main show no differences of use: so, for example, *tītar* at RV. ii. 31. 2; and *tīra* at RV. i. 32. 14. But *tīrā* forms an exception; it is used only with prepositions, and has a causative sense. From the root *hū*, the various present-stems (*juhū*, *hāva*, *huvā*, *hū*, *hūiya*) are used with entire equivalence: examples are RV. i. 4. 1; vii. 26. 2; x. 81. 7; i. 89. 3; 35. 1. Other roots discussed with the same result are *mad-manū*, *vaç*, *muc*, *cit*, *jus*, *bhi*, *hvr*. From the root 2 *yu*, however, the "inchoative" present-stem *yúcha* has a distinct intransitive value, 'keep one's self away,' the other presents being transitive: compare RV. viii. 39. 2; 52. 7, with vi. 47. 13; v. 2. 5. The other roots making a reduplicated present are not even worth mentioning; and it must accordingly be confessed that, with the exception of the unique couplet *bibhar* and *bhara*, there is nothing traceable in the Vedic use of the reduplicated present which should tend to overthrow the current opinion to the effect that its functional differences, if they ever existed, have been wiped out.

In one present-stem evidently derived from the root *tṛ*, namely *tū'rva*, there is to be noted an occasional causative value: e. g. *tū'rva-tan* [*mā*] *narā duritā't* (RV. vi. 50. 10), 'save me, ye men, from ill-hap.' Other examples are found at RV. i. 100. 5; viii. 20. 24; 74. 10. But there are also passages, as RV. vi. 15. 5, where *tū'rva* is equivalent with other stems from the same root. The same causative force, now, is very apparent in *jāruva* from the root *jṛ* (e. g. RV. ii. 30. 5; vii. 104. 4; viii. 60. 7), while *jāra* and *jurā* are almost invariably intransitive (*jurā* is causative at i. 182. 3). And *dhā'rva*, apparently formed in a similar manner from a root *dhr*, and meaning 'damage,' may also be causative in value. A like tendency seems observable in stems of the type *jāruva*. This stem, as well as the more original *jīnu* (which occurs only twice in RV.), is readily explainable as causative of 1 *jī*, and signifying 'cause to prosper.' Among the other various stems of *jī* no functional difference is to be detected (as to the middle-passive *jīya*, see below). The stem *inva* has a like causal force; and examples of the more primitive *inu* are used in the same manner: e. g. iv. 10. 7; x. 120. 7. On the other hand, *pīnuva* proves nothing; for while it is itself distinctly causal, the other stems coming from the root *pi* or *pt* are much the same, 'cause to swell' in the active, with additional reflexive value in the middle: for examples, active, see RV. i. 64. 6; iv. 16. 21; middle, see RV. i. 79. 3; 164. 28; iv. 27. 5. The same is the case with *ṛnuvā*; the causal sense is shared by it with *ṛnu* and *īyar*: see RV. i. 174. 9; ii. 42. 1; ix. 7. 5; but intransitive uses also occur, as at RV. i. 35. 9; vi. 2. 6. The stem *hinva*, occurring only twice, has a value that may be understood as causal; but so also has *hinu*, in its numerous occurrences. And when we consider that the so-called root *hi* occurs in RV. almost only in these two present-systems, we shall be led to suspect that it is nothing more than a weak root-form of *hū*. The root *dhinc* of the grammarians corresponds to a stem *dhinu* of the Brāhmaṇas, and its meaning 'satiare' may also be regarded as causal, and related to *dha*, 'suck, drip,' as *hi* to *hū*. In this connection, note also the so-called root *mṛ* and the *nā* present-stem of the root *mṛ*; both are causal (cf. AV. v. 29. 11; vi. 142. 1); while *maru* is intransitive (e. g. RV. i. 191. 12; x. 86. 11).

We have thus found a number of *nu*-presents having a more or less pronounced causal sense. The same, now, may be sought further in the stem *sunu*. Under the roots *su*, 1 *sū*, 2 *sū*, Grassmann intimates that the three may be only one, but without going into details. If the original root meant something like 'bring to light, produce, set in motion,' we have these senses unimpaired in the stem *suva*; the middle stem *sū*, 'bring to light for one's self,' naturally signifies 'give birth to;' and *sunu* with its causative force is 'cause to bring forth, press out.' It is unnecessary to refer to examples, as the three are separated in Grassmann's lexicon.

All attempts, however, at tracing a similar value in other *nu*-stems appear to lead to no result. Among those roots under which search has proved in vain may be mentioned *stṛ*, *man*, *ṛdh*, *tṛp*, *vṛ*. We can only claim to have demonstrated the probability that a causal value once, or in certain cases, attached itself to the nasal classes.

The *sk*- or *ch*-class is the most disappointing of all, in view of the peculiarly marked character of the present-sign, and the inchoative value which appears here

and there to belong to it in the related languages. Two of the most important stems of the class, *gácha* and *yúcha*, have been already disposed of, and any speciality of meaning has been found only for *yúcha*. The stem *ichá* does also in a measure exhibit a peculiar function, which is not easy to characterize. Grassmann, while recognizing the original identity of 1 *is* and 2 *is*, explains *ichá* by 'set one's self in motion toward something'; while the other stems are explained upon the basis 'set in motion'; we have here, then, a reflexive or intransitive sense for *ichá*, comparable with the intransitive one of *yúcha*. But this use of *ichá* is not universal (cf. RV. i. 80. 6), nor is it impossible to show points of contact with the presents of 1 *is* and 2 *is* (cf. RV. ii. 20. 5). Nor do the stems *uchá*, *yácha*, and *rchá* offer conditions favorable to the presumed inchoative value of the *ch*. The last two do indeed show some tendency to differentiation in meaning from the other stems of their respective roots, but not distinct enough to make it valuable in the consideration of more general questions.

In the *ya*-class (or *div*-class) is seen a marked tendency toward intransitive, reflexive, or even passive function (Whitney, Skt. Gr., § 762); and this is sometimes so clear as to furnish a distinct intransitive conjugation over against the transitive of the present-stems. So, from the root *dr̥h* or *dr̥h̥h*, the stem *dr̥'hya* (e. g. RV. iii. 30. 15; viii. 24. 10; 80. 7), against *dr̥h̥ha* (e. g. ii. 17. 5; vi. 67. 6; x. 101. 8). The intransitive use of *rudhya* with *anu* is too familiar to require illustration. And *jī'ya* (AV. *jīyá*) is used along with and as equivalent to full passives: so at RV. ix. 55. 4; x. 152. 1; the same is likewise true of *mī'ya*. On the other hand, the cases in which *ya*-stems are not intransitive, and do not differ in sense from other present formations from the same root, are also common.

As regards the remaining conjugation-classes, enough material has been collected and examined—and to some extent exhibited above—to put beyond question the fact that there is nowhere any specialization of the use of a class, in any way that should help us to a conception of the original value of its class-sign.

A search for traces of dialectic use was also undertaken, and carried far enough to show that it would doubtless continue to be fruitless, so far as the present-stems are concerned. A number of prominent roots were made the basis of the investigation, and their present-stems numbered as found distributed among the books of the Rig-Veda, in order to see whether a given book employed a given stem, or more than one, with such predilection as might be presumed due to dialectic tendencies. But absolutely no such tendencies come to light. By way of example may be given the statement in detail for the root *hū*: it is a fair illustration of the state of affairs also in regard to the other roots:

| Book | <i>hū</i> | <i>juhū</i> | <i>hura</i> | <i>hava</i> | <i>hvaya</i> | <i>johū</i> | total |
|-------|-----------|-------------|-------------|-------------|--------------|-------------|-------|
| I | 4 | 1 | 21 | 44 | 19 | 6 | 95 |
| II | 0 | 0 | 8 | 7 | 1 | 1 | 17 |
| III | 0 | 0 | 6 | 11 | 0 | 3 | 20 |
| IV | 0 | 0 | 4 | 7 | 2 | 0 | 13 |
| V | 3 | 0 | 6 | 6 | 3 | 5 | 23 |
| VI | 6 | 0 | 10 | 9 | 4 | 1 | 30 |
| VII | 2 | 0 | 15 | 16 | 1 | 8 | 42 |
| VIII | 3 | 0 | 32 | 33 | 2 | 2 | 72 |
| IX | 0 | 0 | 3 | 0 | 0 | 0 | 3 |
| X | 1 | 0 | 13 | 8 | 10 | 2 | 34 |
| Val. | 1 | 1 | 0 | 2 | 0 | 0 | 4 |
| Total | 20 | 2 | 118 | 143 | 42 | 28 | 353 |

It is easy to see that there is but one point here which has any significance as disturbing the equality of distribution of the present-systems: namely, that *hvaya* has 29 out of its 42 occurrences in the 1st and 10th Books, in accordance with the generally recognized later character of these Books—*hvaya* being the only present-stem that has survived in the later language.

Finally may be noticed the numerous cases in which two or more of these stems occur in the same hymn: *hara* and *hvaya* are found in different verses of i. 21, 22, 36, 27, 102, 114, 117; ii. 12; iv. 39; vi. 26, 33; x. 17; *hura* and *hava* in different verses of i. 127; iii. 20; vi. 60; vii. 32, 56; viii. 1, 13, 22, 27, 32, 66; x. 150; *hava* and *hū* in different verses of i. 106; vi. 46; vii. 30; *hvaya* and *hū* in different

verses of x. 112; *hvaya*, *hava*, and *hura* in different verses of i. 23; viii. 5, 26; *hvaya*, *hura*, *hū* in different verses of v. 56. In the same verse are found *hvaya* and *hava* at ii. 12. 8; *hava* and *hura* at vii. 41. 1; x. 160. 5.

This paper, being unfinished at the end of the afternoon session, was taken up again and completed at the evening session.

4. The Color-System of Vergil, by Prof. T. R. Price of Columbia College, New York.

In Greek poetry, light is the expression of life; but, in Latin poetry, light is converted into color. Especially is the poetry of Vergil marked by great variety and richness of color-effects. The word *color*, in its antique sense, as distinct from its modern scientific sense, denotes the cover, or surface, of things, distinguishable and separable from their substance. The word is used by Vergil in at least six different senses. To express high color, Vergil uses 27 terms, and to express blacks, grays, and whites, which in Latin are often true color-terms, he uses 15 terms more. Thus each term has to express a large number, 26 at least on the average, of closely related tints. Vergil uses the color-terms of the red-group 77 times, and of the green-group 65 times. For the violet-group he has no special term at all. Of the color-terms lying between red and green he makes 97 uses; and of color-terms lying between green and violet he makes 57 uses. Of the group lying outside of the spectrum, purples, whites, grays, and blacks, he makes 304 uses.

All color-impressions consist of three elements: hue, luminosity, and purity of color. Vergil's use of color-terms, like the painter's use of pigments, does not express absolute hue, but hue as varied by luminosity and purity, and especially by contrast of color. Examined in this way, Vergil's use of color-terms is always accurate, the result of close and loving observation.

To fix the exact meaning of a color-term is a problem of philology. To solve the problem, we must know: 1. the etymology of the word; 2. the physical standard of the color; 3. the extension of the term on both sides of the standard; 4. the variation of the color in purity and luminosity; and 5. the variation of the color by contrast. Each color-term used by Vergil has been separately studied, so far as the material allows, by each of these five methods.

Color as conceived by Vergil differs from the diffusion of color in the real world in three ways. The colors that lie about the middle of the spectrum predominate over the colors of both ends; warm colors, including the purples, predominate over cold colors; and the more luminous predominate over the less luminous.

The Vergilian color-system is largely in advance of the Homeric, and almost up to the full measure of modern art. Red, red-yellow, yellow, green, green-blue, and blue are all distinctly recognized, and marked by distinct terms. Violet is absent; but there is clear evidence that, although Vergil had no distinct term for violet, he had the sense of the color itself.

5. On the new edition of the Cylinder Inscription of Assurbanipal, by Prof. D. G. Lyon, of Cambridge.

In the British Museum are several copies of this cuneiform text, more or less complete, and numerous fragments of other copies. The inscription has three times been published in cuneiform characters: 1. in the Cuneiform Inscriptions of Western Asia, vol. iii., London, 1870; 2. in Mr. George Smith's History of Assurbanipal, London, 1871; 3. in the Cuneiform Inscriptions of Western Asia, vol. v., London, 1880. The first edition presents a large number of *lacunæ*, although the text was partially restored from other cylinders and tablets containing the same narrative. The second edition is an attempt to present in chronological order the narrative of Assurbanipal's history, as recorded in various cylinder inscriptions and on tablets. While filling many of the *lacunæ* of the first edition, it leaves many others which could not at the time be filled. The happy discovery of Mr. Hormuzd Rassam has added a new cylinder to the treasures of the British Museum, and Mr. Theophilus Pinches, who prepared this new copy for the 5th volume of W. A. I., has done a capital piece of work. Only two parts of lines are wanting in this long and beautiful text, the *lacunæ* having been filled by Mr. Pinches from other cylinders.

Translations of the cylinder inscription have four times been published, all from the pen of Mr. George Smith: namely, in *History of Assurbanipal*, London, 1871; *Records of the Past*, vol. i., pp. 59-108, London, 1875; *Assyrian Discoveries*, pp. 319-376, London, 1875; *Records of the Past*, vol. ix., pp. 39-64, London, 1877 (the last only a reprint from the *History of Assurbanipal* after Mr. Smith's death). Sir H. C. Rawlinson and M. Jules Oppert are said to have translated parts of the Egyptian campaigns (*Records of the Past*, vol. i., p. 57). The great improvement of the last edition of the original over older editions entitles this important text to a new translation.

The course of the narrative in the cylinder text is well known. The inscription is a record of nine campaigns of the Assyrian monarch, two of them being directed against Egypt, one against Tyre, and one against Arabia. The whole is introduced by an account of the youth and accession of Assurbanipal, and closed by the narrative of his rebuilding the harem (*bît riddî*) at Nineveh.

The present paper is only preparatory to a future one, whose object will be the discussion of some passages made clear by the new edition of the original, and of such others as have been inaccurately translated, or as present, either in idea or in mode of expression, parallels with Hebrew usage.

The expression *sharru sha ilu idûshu atta*, V. R.* ii. 123, is rendered by Smith 'the king whom God has blessed art thou.' More correct would be the translation 'the king whom God knows (= foreknew) art thou.' *Idû*, 'know' (= Heb. יָדַע), occurs often, but not, so far as I am aware, in the sense 'bless.' The sense 'know, foreknow' is not only etymologically better, but agrees well also with the opening passage of this inscription, where Assurbanipal represents himself as pre-ordained by the gods to be the king of Assyria. The use of *ilu* is very rare in the singular, except where the name of the god follows, as *ilu Ashur*, *ilu Nabu*, or in phrases where god and man are compared or contrasted, as *tubushti ili u shurri*, 'clothing of god and of king.' IV. R. vii. 31 b. In our passage the word has a monotheistic tone, which is seldom seen in writings of the date of Assurbanipal.

The passage *shalamtashu idûshu indashsharu pagarshu*, 'his dead body they cast down, they tore in pieces his corpse.' V. R. iii. 8, 9, illustrates at once the parallelism so frequent in Assyrian writing, and the striking similarity of the Assyrian and the Hebrew vocabularies. *Shalama*, accus. of *shalamtu*, is a fem. noun from the verb *shalmu*, 'finish' (Heb. שָׁלַם), and signifies 'something which is finished, done, past,' hence 'dead body:' a use similar to that of כִּפְלוֹת, from נָפַל, 'fall.' *Pagar*, construct from *pagru*, is synonymous with *shalamtu*, and is the same word as Heb. פָּגַר, while the Syriac *pagrâ* means 'body' in general, as well living as dead. *Idû*, by assimilation from *indû*, is from the verb *nadû*, synonym of *adû*, both of which the Hebrew presents in its נָדָה and נָדָה. *Indashsharû* = *intashsharû* is represented in Hebrew by the single word נֶשֶׁר, 'a vulture,' so called because it tears its prey in pieces.

Among numerous parallels with Old Testament narrative may be mentioned the utter desolation of the fields of Elam, V. R. vi. 100 ff., parallel with 2 Kings iii. 25; the restoration of the goddess Nana to her sanctuary at Erech, V. R. vi. 107 ff., in some respects similar to the account of the restoration of the Ark from the land of the Philistines, 1 Sam. vi.; and the tragic death of Ummanaldas, V. R. vii. 30 ff., parallel with the story of Saul's death, 1 Sam. xxxi. But the discussion of these and of other points is reserved for another paper.

6. Remarks on certain Readings of the Vatican MS. of the New Testament, by Prof. Charles Short, of Columbia College, New York.

Prof. Short made an oral communication in reference to matters connected with the Codex Vaticanus, or Codex B, of the Old and New Testaments. By the courtesy of the Librarian of the Vatican, he had himself, after some delay, been allowed to see the Codex in June, 1881, during a visit to Rome. He had exam-

* By V. R. is meant volume v. of the "Cuneiform Inscriptions of Western Asia." This method of citing has become quite general, is brief, and is also correct, inasmuch as Sir Henry Rawlinson is editor of the work.

ined it, as fully as the brief time permitted, written out a description, and prepared a *fac-simile* of a part of it. He gave an account of the publications made of the text: Cardinal Mai's edition was finally issued in 1857, and followed by a cheaper edition of the New Testament in octavo in 1859. In view of the unsatisfactory character of this publication, Tischendorf attempted to obtain permission to do the work over again, in the style of his *Codex Sinaiticus*, but was refused; the intimation being given him that the enterprise would be undertaken by Italian hands. He was sufficed, however, to spend some three weeks of study on the MS., in the spring of 1866; and this enabled him in 1867 to put forth a quarto edition of the New Testament far superior to any that had preceded it. His title, which overstates his brief and hurried work, was: *N. T. Vaticanum post Angeli Mai aliorumque imperfectos labores ex ipso codice edidit etc.* The project of Pius IX. has since been realized. The new edition, rivalling the imperial *Codex Sinaiticus* in magnificence, consists of six volumes, sq. folio. The New Testament appeared in 1868, and was criticized severely by Tischendorf in his *Appendix N. T. Vaticani*, 1869. He was replied to by the Roman editors, and made a violent and bitter rejoinder in a pamphlet in 1870. Along with the concluding volume (containing the *Apparatus Criticus*), published in 1881, was issued a *brochure* of 31 pages in small folio, giving a general account of the great work. Prof. Short had received a copy of this brochure from one of the collaborators of the edition; and he presented in detail to the Society, with blackboard illustrations, some of the points of difference demonstrated by it between the *Codex* and Tischendorf's edition of it, amounting to not less than seven for the first page of the *Codex*.

This was the last paper offered during Wednesday evening. On meeting again at the same place in the morning, Prof. I. H. Hall in the chair, the Society resumed the hearing of communications.

7. Rejoinder to the Counter-Criticism of M. de Harlez, by Prof. J. Luquiens, of Boston; communicated by the Corresponding Secretary.

The personal character of the following remarks finds its only excuse in the article lately published in the "*Muséon*" by M. de Harlez, and reproduced in pamphlet form, under the title: *Origine de l'Avesta, Système et Critique de M. Luquiens*. Without wasting any expression of surprise or regret, I may say that M. de Harlez, having taken offense at my criticism of his recent work on the Avesta (see Proceedings for May, 1882), has chosen this way to manifest his indignation, and accuses me of self-contradiction, bad faith, and prevarication. These are very harsh words; but, in a somewhat obsolete dialect of Zéud polemics, they mean simply that on some points—as, for instance, the value of his own writings—M. de Harlez's opinion and mine are at variance. That he holds to the old style of warfare is to me quite evident, from the singular qualification which he appends to his charges at the very outset: my guilt is hardly personal, it seems, not inborn with me; I am simply a victim of disreputable fellowship. Once even my labors were promising, gave expectancy of something better, but in a fatal moment (woe worth the day!) I joined the *a priori* anti-traditional school, and forthwith adopted their "sad mania of perverting others'" opinions. There is also a further mitigation of the charges against me. M. de Harlez acknowledges: namely, that I borrowed from my ill-favored associates their procedure, but not their insulting language; but if I, though in evil company, have kept to the pristine fairness of my speech, why should M. de Harlez, still in the folds of unblemished orthodoxy, apply to my criticisms such opprobrious epithets? Is there a privilege of hard language connected with sound doctrine? I must regret, however, that since M. de Harlez is pleased to consider my guilt as the result of newly formed connections, he has not been at pains to specify the date of this evolution; my literary baggage is so slender as to make the task an easy one; in reality, of two essays which alone bear on the subject, the first, published in the *New Englander* in 1879, implied my belief in the high antiquity of the Avesta; and the second (*Journal of Philology*, Sept., 1881) outlined with unmistakable precision my attitude in regard to Avestan tradition. As these are the very issues

between us, I must conclude either that my former essays were by no means so promising as my adversary kindly admits, or that my guilt began at the exact moment when my criticism reached his own writings.

Be this as it may, honesty forbids me to see any assuagement of my faults in others' participation. M. de Harlez may not fully understand this, but I must disclaim belonging to any school in the sense he attaches to that word: I object, namely, to being shut in by so narrow a classification as would prevent me from carrying my sympathy or approval from one side to another over the field of Avestan studies. I will acknowledge a sort of sequence between the several positions which a scholar may hold in this study; one cannot well base the interpretation of the Avesta on linguistic comparison alone without admitting also a high antiquity of the Avesta; in this respect I gladly follow in the footprints of the men whom M. de Harlez drives into a corner by themselves under the name of "*a priori* anti-traditional school." Yet I should feel wanting in catholicity if I failed to express my deep sympathy for the works of Windischmann, Spiegel, and others—a sympathy as sincere as if it rested on conformity of method. In their historical position, narrow as it seems to me in some respects, I see a greater insight into the religious value, more regard for the individuality, of Mazdeism, than in the point of view which makes of the Avesta a philological phenomenon chiefly interesting on the score of its affinity with the Vedas. For M. de Harlez himself, I have more than the fellow-feeling just mentioned; we both, though each in his own manner, exerted ourselves against the hasty spread of a mythical conception of the Avesta. If he ever ascribed my part in that contest to mere school feeling, he was mistaken; I had then and have to-day no other rule than my responsible and rational appreciation of the facts at hand; and, following this rule, I mind not being counted out of school by strict partisans on either side.

This unwillingness on M. de Harlez's part to admit any free exercise of judgment out of the ruts of acknowledged schools is characteristic of the part of his Answer which refers to my opinion as to the age of the Avesta. He there reiterates the arguments of his Introduction, and comes to the conclusion that his plea is right in all points, and mine wrong throughout: so say contending lawyers in court; and yet the decision rests with the jury. I, for one, gladly leave the case with the reading public. If I open the argument anew, it is to remark that M. de Harlez, having thrust me of his own accord into a school of his own description, assumes to lay upon my shoulders the burden of all that has been advanced by the members of that school. Thus, for instance, I am made to adopt Haug's theory of a direct opposition between Gāthās and Vedas. Now in my essay, "*The Avesta and the Storm Myth*," printed three years ago, I already expressed strong misgivings as to the plausibility of this view; and farther study has confirmed my doubt. I must then beg to say that "*Vedism*" is not necessarily identical with "*Vedas*;" the former means rather a stage in the religious and cosmogonic thought of the Vedic Aryans—a stage of which the Rig-Veda is indeed the highest utterance, but which must have existed in various forms, and with more or less definiteness, according as the localities were situated nearer to, or farther from, the religious centres; therefore, I felt bound not to be more definite than my convictions would allow, and located new-born Mazdeism "on ground distinctively Iranian and yet within reach of Vedism *though it be one of its furthest ramifications*"—which is far from holding the view that "the Gāthās continually allude to the Vedas." Nor is there a contradiction between the belief just expressed and my subsequent admission that certain practices of later Mazdeism denote a Scythic influence. If this be a contradiction, not half my sin has been told; for I see in the Vendidad traces not only of Scythic, but also of Semitic notions; I so little exclude exotic influences from my general conception that I see in their absence or presence—i. e. in the more or less purity of the tenets—the very criterion of the respective age of Avestan writings: a view which is not belied by my statement that "nothing in the Avesta suggests the proximity of any but kin or kith until we come to the very latest strata of Mazdaic writings." If it was so difficult to reproduce in their integrity my views, which when put in print hardly fill two pages, will not M. de Harlez, whose statements are disseminated over a large octavo and innumerable pages in lesser bulk, condone the errors of the same nature which I am supposed to have committed?

Let us now examine M. de Harlez's charges of unfairness, or some characteristic

samples of them; for there is hardly a statement of mine that he does not resent as a personal injury.

In the first place, I wronged him grievously by ascribing to him the view that Mazdeism was the outcome of Semitic, and, more especially, of Jewish contact and influence. "No one has ever claimed," he says, "that Zoroastrianism had to a *certainly* borrowed from the Jews." My carelessness on this point is clearly inexcusable, for I have been imposing upon the good faith of my fellow-members, presenting as a serious belief of M. de Harlez that which was a mere hypothesis, a speculative by-play, as it were. But though I regret the time wasted in the consideration of what I was dull enough to take in earnest, I am glad that M. de Harlez, even at this late hour, qualifies his theory; for I much fear that I am not the only reader upon whom his statements left a wrong impression. My mistake, however, was not unnatural; when, in his *Origines*, M. de Harlez prefaced his elaborate argument with the striking dilemma that either the Jews or the Iranians have borrowed from each other, I candidly inferred that our writer, having to his satisfaction disproved the latter thesis, was bound to the converse proposition, even though he modestly asked his readers to draw their own inferences. But if "no one" ever defended the certainty of the contributions of Judaism and Semitism to the Avestan doctrine, will M. de Harlez tell us who wrote the pages ccv. and ccvi. of his *Introduction*, and among others the following passage: "We believe that we can affirm as *indubitable* that the principles of this transformation, of this new creed (the Avesta), were taken from the Western neighbors of Iran, from Babylon and the Israelites."

In the preceding instance I merely "falsified" the facts; but there was in my criticism a part even less approvable: to wit, my characterization of M. de Harlez's interpretation; and surely, if it be wrong to criticize M. de Harlez's views, my remarks on his method were deeply dyed in guilt; for they alone, of all others, were to an extent personal. Not entirely so, however; for I hold the belief that no system of interpretation of the Avesta which rests upon the data of tradition can be so consistent with itself as not to desert occasionally its premises for the opposite ground of etymology and linguistic comparison, and that to this alloyage of disparate methods we owe most of the jar and checker-work of our versions. If these strictures were uttered in connection with M. de Harlez's work, it was because, as a very result of the step forward which I acknowledged in his personal efforts, the conflict of the dual methods is more marked. Nor is this general statement gainsaid by the declaration on p. 12 of his Answer that "the only good method is that which takes tradition into account, not blindly, but with discernment." If this means any thing, it is a claim on his part to follow alternately tradition, and comparison according to a law of his own, whether it is called "discernment" or discretion. The example I selected to prove my point proves precisely the reverse, says M. de Harlez; it may be so; I lay no claims to infallibility; but whether he is right in accusing me of bad faith will be best established by a short review of his plea. I, namely, selected the word *draona*, and blamed the motley rendering it received in his version: 'bread' and 'sacrificial bread' in accordance with a Pârsi custom, and 'offering' in accordance with his own discernment. Now, says M. de Harlez, no one ever did regard the *draona* of the Avesta as an equivalent of the modern (Pârsi) *darun*. The "no one" so often quoted by M. de Harlez is a mysterious personage, who deals with very sweeping statements, and who is, in the nature of things, difficult to reach. But I dare say that "no one" is not acquainted with the facts; for M. de Harlez himself, in his note to Vd. v. 76, says very positively that the *draona*, not *darun*, was a little round loaf of the size of a five franc piece. Again, he was so far from taking *darun* as the starting point of his rendering, that on the contrary he derived *draona*, in his Handbook, from Sanskrit *dravîṇa*, 'good, gift, present,' and regarded 'offering' as the principal sense. M. de Harlez, who forgets sometimes what is written in the very work he defends, will forgive me if I failed to remember what is said in his Handbook; yet, though it may seem strange to translate a word written in Media not earlier than the 6th century before our era in accordance with a word current among Indic Aryans at least four or five hundred years back of that date, we cannot but acknowledge this gratifying progress in Avestan methods. I must, however, suggest that an etymology is often a superfluity in the study-room of a "traditional" scholar; Spiegel also had one; he

connected *leaven*, 'small loaf,' with Skt. *leṇa*, 'small-earthen,' but never claimed to have suggested the former out of the latter meaning. Claims to an etymological method rest not on better grounds: if indeed M. de Harlez asserts that out of the etymology *leṇa* he inferred in the course of a rational process the meanings 'offering, consecrated wife and bread,' I am disarmed; and only wonder at the results. If Sanskrit words were in their tracks. But I must say that from the fact of a better offering-process, not unlike the one outlined in my criticism; namely, that M. de Harlez, proceeding from the traditional meaning 'small loaf,' *leṇa*, and to charge these upon Sanskrit grounds; it appears to me that it is not *leṇa*, but *leṇa* which gave M. de Harlez the meanings 'offering' and 'bread,' out of the meanings 'bread' and 'offering' which led him to give Skt. *leṇa* the sense of 'offering.' For being a Sanskritist as well as a Zend scholar, he will not neglect the fact that *leṇa* from *leṇ*, 'small,' meaning even in the Vedas nothing but 'small earthenware,' in position to seal and land property, cannot in the interior Aryan period have meant 'gift, present or offering.' M. de Harlez's rational explanation of his method shows up some obscurity in my conception of it, but does not change it materially, and if I hold it even now, my criticism based on such facts and statements as were found in his version alone could not but take the form which it has assumed.

I hope that I have not overstepped the bounds of legitimate polemics in any way I have here said, and more than in my previous remarks. There are in his *Archa* many things, especially about my own views, which I have read with interest, and I hope with profit; but this is not the time to answer them. The harsh language I fear found in the very profuseness defeats its end; but I must insist upon the right of every one's appreciation of a writer's works out of his works themselves, not out of his own estimate of them.

3. On Eggeling's Translation of the Çatapatha-Brâhmana, by Prof. W. D. Whitney, of New Haven.

The writer began with a general account of the work under examination. It forms a part of the series 'Sacred Books of the East,' published under the editorial charge of M. Müller; and it is, so far as ancient India is concerned, the most legitimate and valuable member of that series. The latter is somewhat open to unfavorable criticism, both for what it includes and for what it omits, in its Indian division. It is chiefly in the great works which, like the Upanishads, have been neglected and with the state of creation of those which, like the law-books, are very welcome additions to Indian knowledge, but have too little to do with religion to fall properly under the title of 'Sacred Books'; or of those which, like the Bhagavad-Gîtâ, are liable to both these objections; and it does not include at present, or promise for the future, any Vedic text. If anything was confidently expected by the public from this enterprise, it was a version of the Rig-Veda in English from Müller's own hands; and it would be curious to learn on what ground he accounts for the withholding of such a version. There are in existence, it is true, two complete German translations, but neither of them is satisfactory, and both are far more inaccessible to English readers than are versions of many of the works included in the whole series, in its various departments. The English Rig-Veda begun by Wilson is so little in accordance with, and so far behind, the present state of Vedic scholarship, that it must be pronounced hardly better than worthless; and even Wilson's continuator seems to regard it as not worth completing; for he has suffered sixteen years to elapse since the last volume of it appeared.

No one will doubt the desirableness of including at least one work of the Brâhmanic class among the published Sacred Books of India; we can only question whether it was worth while to begin so vast a work as the Çatapatha in a series already nearly full; for the volume now issued, of 450 octavo pages, gives not any more than a fifth part of the whole; and five such elegant volumes would cost more than the original Sanskrit text. But perhaps a fragment of the Çatapatha is better worth having than the whole of any other Brâhmana; for it is certainly the most generally interesting, as well as the most extensive, of the works bearing the name. Even the as yet little known Jaiminiya- or Talavakâra-Brâhmana, if we include with it its Upanishad-Brâhmana (of which the Kena-Upanishad is a

chapter). is somewhat smaller and much more tedious; the Aitareya-Brāhmaṇa, already published, has only about a quarter as much matter; and none of the others is more comprehensive than this.

Parts of the Catapatha have been already translated: so the first chapter, by Weber, in the Journal of the German Oriental Society, vol. iv. (1850); this was the first specimen of the Brāhmaṇa style rendered in a European language; then considerable passages of this, as of other Brāhmaṇas, by Muir, in his five volumes of Original Sanskrit Texts; and somewhat over a chapter (next following the contents of the volume now under discussion), on the ceremony of consecration for the Soma-sacrifice, by Dr. Lindner (Leipzig, 1878). Delbrück also, in his volumes of contributions to comparative syntax, gives numerous Brāhmaṇa-extracts, taken especially from this text, and rendered with a care, and an appreciation of the niceties of style, which are not exceeded, if they are equalled, by any other scholar.

Eggeling's translation is made with competent knowledge, both of the Brāhmaṇa style and of the details of the ceremonial with which it deals, and is worthy of high commendation. For some purposes, a closer adherence to the letter of the text, with its curiously broken and jointed clauses, would be desirable; but it is by no means easy to maintain this and make the version at all readable, and the author is not fairly to be blamed for following a different method. His notes are valuable, adding to the comprehension of the text, and especially interesting as giving occasional glimpses of the further inane intricacies of the ceremonial, passed unnoted by the Brāhmaṇa, and in part perhaps unknown at its period.

It appears here and there as if Prof. Eggeling (unless he is careless in his citations) had a slightly different text before him from the published one. Considering the excellence and accuracy of the latter (quite wonderful for the time at which it appeared), and the improbability that another will be put forth for a long time to come, it is the obvious duty of any one undertaking a work like that before us to report with conscientious care every correction of an error, or substitution on manuscript authority of a better reading, which he finds occasion to make in Weber's text.

There are, of course, as necessarily in every such work, occasional oversights, due to haste and insufficient revision. The worst of these—rendering *né 'jiré* at I. ii. 5. 24 by 'washed their hands' (as if *nin'jiré*) instead of 'did not sacrifice,' against the plainest evidence of the accentuation and the context—he has doubtless himself long since noticed; it is one of those *humana* to which even an accurate worker is occasionally liable. Here and there an instance occurs of a phrase badly rendered in one place while it is correctly understood elsewhere: thus, for example, *yāi 'śam iyām jīth* at I. vi. 2. 1, 2 (compare II. iv. 4. 15); *dvayām* rendered 'twice' at I. viii. 3. 14, but correctly 'a twofold reason' at ix. 1. 1; 3. 7. A number of cases of omission of a word or phrase or sentence might be pointed out (e. g. at I. vi. 3. 13; ix. 1. 27. II. i. 3. 1; 4. 22; ii. 1. 8; iii. 3. 18, 20; v. 1. 11; 2. 38); but none of them is of particular consequence. Numbers and persons are sometimes wrongly rendered (e. g. I. iii. 1. 3; v. 4. 12; ix. 1. 11. II. iii. 1. 14). More important is a not very infrequent mistranslation of the aorist: as a present (e. g. II. iv. 1. 11; 2. 11); as an imperfect (e. g. I. iv. 1. 39; viii. 3. 11, 17; ix. 1. 20; 3. 10, 12. II. vi. 1. 15); or, what is much worse, as an optative (e. g. I. vii. 3. 10, 11. II. i. 4. 19, 20): surely, the use of this tense is accurate and consistent enough in the Brāhmaṇa to call for consistent treatment in a translation. Now and then, an erroneous rendering or division depends upon the neglect of a point of accent: instances are II. iii. 1. 11; iv. 3. 13; and especially II. ii. 2. 20, where Eggeling's complete mistranslation is corrected from Delbrück in a note at the end of the volume.

Examples of an objectionable or unhappy rendering of single words and phrases are for the most part too unimportant to give in detail. A very common instance is the translation of *kapāla* by 'pots' (perhaps after Haug); or does Prof. Eggeling believe that the Hindu offerings were actually made on fragments of broken pottery? 'Equipment' for *sambhāra* (II. i. 1. 1 etc.) is so ill-suited that the translator is not able always himself to adhere to it.

It is also a matter of course that any one going over the translator's work after him will find now and then a passage which appears to have been wrongly apprehended—as, indeed, there are passages of difficult and doubtful interpreta-

tiou, in regard to which the opinions of scholars may be expected to be at variance. A few cases are cited here.* The obvious meaning of the last sentence in I. iii. 1. 22 is: 'One and the same [everywhere], forsooth, is the significance of cleansing: he just makes it thus sacrificially pure.' The passage I. vi. 1. 4 is rather to be rendered: 'That, now, was an offense to the gods; they said: "verily, for less than this, enemy begins hostilities against enemy; how much more, for what is on such a scale! Contrive ye how this may be otherwise than thus."' There is much to object to in the translation of I. vi. 3. 26; the accent of the first *āpnōti* is neglected (it means 'whichever two in each several case he gains by means of the two butter-portions'); *ahorātré* and *ardhamāsū* are left out; and the subjunctive *asat* is turned into an aorist. A little later, at 33, *anyatoghātā* signifies 'striking in another direction': that is, one whose back is turned toward his attacker can make no effective resistance, because, if he deals a blow, it is in another direction than at his assailant. The last half of I. viii. 2. 8 should read: 'Now whenever the metres gratified the gods, then the gods gratified the metres; now then it has been previous to this that the metres, harnessed, have borne the sacrifice to the gods, have gratified the gods'—and hence he now proceeds on behalf of the gods to gratify the metres. The asserted reference to forbidden degrees of kindred at I. viii. 3. 6 is certainly a pure figment of the commentators. In I. ix. 2. 27, the words *yātra-yatrā* "sām cūraṇam kād ānu are wholly misunderstood; they mean '(them he thus in due form dismisses) about their several businesses.' At II. ii. 3. 3, as everywhere else where it occurs, the translator appears to misunderstand the particle *ēd*, and his version is both an inaccurate and a tame rendering of the colloquially lively original: "'Here we come again," said the gods; and lo! Agni out of sight!' At II. iii. 2. 3, Asant I'āūsava ('the non-existent dusty one') is not the place where they throw the ashes, but the ashes themselves. In II. iv. 2. 1-3, the assignments of gifts are unacceptably rendered; they are as follows: to the gods, 'be the sacrifice your food; yours be immortality, yours might, and the sun your light;' to the Fathers, 'be your eating month by month; be the funeral-oblation (*svadhā*) yours, yours thought-swiftness, and the moon your light;' to men, 'be your eating at evening and at morning; be progeny yours, and death yours, and the fire your light.' At II. iv. 3. 13, attention to the accent of *yijeta* would have saved the translator his difficulty with the particle *vā*: 'if he have [already] sacrificed, or if he be sacrificing with the new- and full-moon offerings, then let him sacrifice with this one.'

The method of transliteration pursued in this, as in the other volumes of the series of Sacred Books, is highly unacceptable; it is the general editor's own "Missionary Alphabet," a mixture, too ugly to be tolerated, of roman and italic letters and small capitals in the same word. The original device was, to be sure, an ingenious one, and the alphabet has its own proper sphere of usefulness—namely, where the resources of a well-furnished printing-office are wanting, and one must accept thankfully the best means of distinction that are available. But it was certainly a grave error of judgment on Müller's part to impose its use upon the Clarendon press, and in these handsome and costly volumes.

This closing the list of communications, the Society passed a vote of thanks to the authorities of Columbia College for kindly allowing it the use of the room it had been occupying, and adjourned, to meet again in Boston, on the 23d of May, 1883.

* A fuller exhibition of them, as well as of the other points criticized by the writer, will be found in his paper as published in Gildersleeve's American Journal of Philology, No. 12.

Proceedings at Boston, May 2d, 1883.

The Society met, as usual, in the Library of the American Academy, at 10 o'clock A. M. In the absence of the President and of all the Vice-Presidents, the chair was taken by the senior Director present, Prof. Peabody of Cambridge, and later by Dr. Ward of New York.

After the settlement of the order of business and reading of minutes of the last meeting, the reports as to the transactions of the year 1882-3 were offered.

The Treasurer's summary of accounts was as follows :

| RECEIPTS. | | | | | |
|-----------------------------------------|---|---|---|----------|-------------------|
| Balance on hand, May 24th, 1882, | - | - | - | - | \$308.25 |
| Annual assessments paid in, | - | - | - | \$575.00 | |
| Life Membership, | - | - | - | 75.00 | |
| Sale of the Journal, | - | - | - | 132.62 | |
| Interest on deposit in Savings Bank, | - | - | - | 6.20 | |
| Total receipts of the year, | - | - | - | - | 788.82 |
| | | | | | <u>\$1,097.07</u> |
| EXPENDITURES. | | | | | |
| Printing of Proceedings, | - | - | - | \$91.60 | |
| Expenses of Library and Correspondence, | - | - | - | 21.00 | |
| Total expenditures of the year, | - | - | - | - | 112.60 |
| Balance on hand, May 2d, 1883, | - | - | - | - | 984.47 |
| | | | | | <u>\$1,097.07</u> |

The amount of the Bradley type-fund is now \$918.44.

The Librarian reported the accessions to the Library to amount to 30 whole volumes, 91 parts of volumes, and 40 pamphlets. Five volumes of Pāli MSS. were donated by Rev. S. C. George. The present number of titles is, of printed books, 4216; of manuscripts, 151.

The Committee of Publication announced that the second half of Vol. xi. of the Journal was not yet in the hands of the printer; they hoped to be able to report something more definite in regard to its prospects at the next meeting.

The Directors gave notice that they had appointed the autumn meeting to be held this year in New Haven, and on October 24th, unless the Committee of Arrangements (the Corresponding Secretary and Treasurer) should see good reason, as the time approached, for changing the day. Further, they had reappointed the Committee of Publication of last year. For election to membership

of the Society, they proposed and recommended the following persons:

As Honorary Member—

Prof. A. F. Stenzler, of Breslau.

As Corporate Members—

Miss Eva Channing, of Jamaica Plain, Mass. ;
 Prof. S. F. Dike, of Bath, Me. ;
 Prof. L. H. Elwell, of Amherst, Mass. ;
 Mr. A. L. Frothingham, Jr., of Baltimore, Md. ;
 Mr. R. L. Goodrich, of Little Rock, Ark. ;
 Prof. T. B. Lindsay, of Boston ;
 Prof. A. B. Nicholson, of Kingston, Ont. ;
 Mr. E. P. Vining, of Omaha, Neb.

The persons thus nominated were balloted for, and declared duly elected.

The choice of officers for the ensuing year being next in order, a Nominating Committee of three, appointed by the chairman, proposed the reelection of the officers of last year, without exception, and their proposal was ratified by the meeting.*

The chairman, Prof. Peabody, read the list of members deceased during the year, and called upon the members present to pay a tribute of respect to their memory. The names communicated were,
 the Honorary Member,

Mr. Arthur C. Burnell, of England ;

of Corresponding Members,

Prof. C. A. Holmboe, of Christiania, Norway ;
 Rev. W. G. Schauffler, of New York ;

of Corporate Members,

Mr. G. A. Perdicaris, of Trenton, N. J. ;
 Dr. T. T. Van der Hoeven, of San Antonio, Tex.

In response, the Corresponding Secretary and others gave some account of the character and works of each of the persons named. The great and painful loss, the severest of the year, sustained by Oriental studies in the untimely death of Dr. Burnell, cut off last October in the flower of his age, was especially dwelt upon, and his great services were briefly set forth. Mr. Dickerman described a visit made by him to the aged missionary, Dr. Schauffler, some years ago, at his home near Constantinople, and dwelt at some length upon his life. A German by birth and a musical-instrument maker by original profession, he had early entered the American mission

* For convenience, the names are repeated here: *President*, Prof. S. Wells Williams of New Haven; *Vice-Presidents*, Dr. N. G. Clark of Boston, Dr. Peter Parker of Washington, Pres. T. D. Woolsey of New Haven; *Recording Secretary*, Prof. C. H. Toy of Cambridge; *Corresp. Secretary*, Prof. W. D. Whitney of New Haven; *Secretary of the Classical Section*, Prof. W. W. Goodwin of Cambridge; *Treasurer and Librarian*, Mr. A. Van Name of New Haven; *Directors*, Mr. A. I. Cotheal, Prof. C. Short, and Dr. W. H. Ward, of New York; Profs. C. R. Lanman, A. P. Peabody, and J. H. Thayer, of Cambridge; and Prof. I. H. Hall of Philadelphia.

service, and done notable work, as preacher and as translator of the Bible into Turkish. He had a remarkable mastery of many languages. Mr. Perdicaris was a man of Greek birth and education, who, after fleeing to this country from oppression at home, held for a time a professorship in Harvard College, but afterwards engaged in extensive business enterprises in the Southern States, and for many years past resided at Trenton, N. J. He died at Tangiers in Africa. Dr. Van der Hoeven was a Netherlander, educated at home as a physician, but long a resident in this country, at San Antonio in Texas, to which place he resorted on account of feeble health. He did not practice his profession, but gave himself to study, for the gratification of his literary tastes, and in order to assist in the education of his family. He was a man of wide and thorough learning and accomplishments, and of rare enterprise. He took up some years ago, at an already advanced age, the study of Sanskrit, on account of its value as an aid to his other linguistic studies, and made himself a well-read scholar. His interest in this language brought him into relations to the Society, with whose Corresponding Secretary he maintained for some years a remarkable intercourse by letter. He is not known to have left any memorials of his scholarship.

The correspondence of the half-year was presented, and some parts of it were read.

Mr. W. W. Rockhill writes from Montreux in Switzerland, enclosing a rubbing of a coin with a Neu-chih inscription, from China. Although the character is at present undeciphered, every document containing it is of value as a contribution to its possible interpretation. Referring to a translation from Tibetan of the *Udānavarga*, recently published by him as one of Trübner's Oriental Series, he says:

"If I am able to call the attention of students to this rich field of Buddhist learning, I have attained one of the objects I had in view in translating this work. Students of Buddhism have been too prone to search for their materials exclusively in Pāli records; whereas I consider it beyond doubt that nearly every one of the southern texts may be found in the Tibetan or Chinese canons."

He sends further a paper on two Sūtras, for presentation at this meeting (see below).

Dr. G. L. Ditson writes from Paris Oct. 31st, 1882:

"It affords me pleasure to state that the Abbé Gruel has started here an Oriental Society, called the *Institut Oriental*. He has had donated to him in the south a large estate, where he is to receive and educate persons from the Orient who shall come to learn something of our arts, sciences, religions, etc., 'respecting the religious belief of every one,' as is stated in his circular. He has also received many other contributions. He is highly recommended by many eminent persons, and has letters of approval from the patriarch of Cilicia, the minister resident at Tunis, the ex-Khedive of Egypt, and others. His address is 33 rue de Sévres."

Dr. Ditson solicits contributions of any works or objects likely to be of value in the collections of such an institution, and is confident that the Society, and its members individually, will take an interest in the enterprise.

The following communications were presented at the meeting:

1. On the Greek Inscription found by Dr. S. Merrill at Gerash, by Prof. T. O. Paine, of Elmwood, Mass.

Prof. Paine exhibited his fac-simile of this inscription (published by Prof. F. D. Allen in Gildersleeve's *American Journal of Philology*, iii. 206-7), and detailed the history of its decipherment. It had been for the first time made out nearly in its entirety, and the general sense gathered, by himself, Dr. Merrill having made over to him his whole material for it during some weeks; he had read all but 18 out of its 267 letters. His fac-simile was placed in the hands of Pres. Woolsey, who recognized at once the character of the inscription as in elegiac couplets, and made certain further restorations; others were added by Prof. Packard. The papers were then passed over to Prof. Allen, who made further amendments, and published the result, with the fac-simile. Prof. Paine disagreed with the last-mentioned scholar in regard to sundry points, as follows. There is no need of bracketing the ν of $\sigma\iota\tau\omicron\varsigma$ in line 1, the γ having been clearly legible in March, 1881, in the squeeze. The stone-cutter omitted the cross-line of an A in each of ll. 7, 10, 15, and that of an E in l. 11; two of these Prof. Allen has inserted. The P does not have its hook closed in the inscription, but is always open below. The final A of $\acute{\alpha}\mu\alpha$, at the end of line 9, is legible. At the end of l. 10 is to be read not $\Gamma\epsilon\rho\acute{\alpha}\sigma\eta\varsigma$, but rather $\epsilon\rho\acute{\alpha}\varsigma$; the stone has $\epsilon\epsilon\rho\alpha\iota$; and there is no trace of following HC, either in the squeeze or the field-copy, nor any room for those letters, even in an abbreviated form or reduced size; the letterer cut the related ϵ instead of ϵ in $\iota\epsilon$. Besides, it is highly improbable that the poet would say "but she gained a portion of the land of Gerash Antioch"—as if we should say "she was buried in the land of Shawmut Boston." The name Gerash, then, is not mentioned in the inscription. Also $\mu\upsilon\tau$, for $\mu\upsilon\nu$, in l. 12, is wrong. Prof. Allen throws doubt on the H by dotting its cross bar; but this was clearly seen on the stone by Dr. Merrill, and in the squeeze by Dr. Paine; and the spacing is also different from what an ϵ would require.

Dr. Paine pointed out the parallelisms between the two halves of the inscription. He also traced the difficulties of the letterer, who began with characters upon too large a scale, 1.7 inches long, but reduced them gradually; and from l. 9 onward made them only 1.26 inches. The first four lines average only 13 letters to the line, the next four average 16½, the next two 19, and the next has 20. In the first four lines, he lost three opportunities of joining letters, making one stroke count as part of two letters; he did not mean to lose another; and he in fact let slip only one, in l. 12. The whole inscription, measured from the squeeze, is 33 by 12.7 inches.

2. On the Site of Pithom (Exodus i.11), by Rev. L. Dickerman, of Boston.

Pithom means 'the abode of Tum,' the god of the setting sun, as Ra was of the rising. It was the name of one of the temple-cities, or store-cities, built by the Hebrews for Pharaoh. "They built treasure-cities . . . Pithom and Ramses" (Exodus i. 11); the Coptic version adds On, i. e. Heliopolis. All agree that these cities were in the land of Goshen, on the Delta, east of the Tanitic branch of the Nile. The design of the paper is to give a review of opinions as to the site of Pithom.

Josephus (*Ant.* ii. 7) says that Joseph met Jacob at Heliopolis. But the Hebrew text says, in Goshen (Genesis xlv. 28). The LXX. translate: 'And Judah he sent in advance to Joseph, in order that he might meet him in the city of Hero, in the land of Ramses.' The Coptic version substitutes Pithom for the city of Hero. Even granting the identity of Pithom and Heroöpolis, which perhaps the Coptic scholars assumed, the site of each is still an open question. On the authority of different interpretations of Herodotus ii. 158, Cary and Wilkinson place Patmos, possibly the ancient Pithom, near Bubastis, at the west end of the canal, Stein places it somewhere on the line of the canal, and Wesseling at its entrance into the Red Sea—a difference of 37 m. p. The itinerary of Antoninus appears to agree with Wesseling. Did then the authors of the Coptic version detect the blunder of the LXX., read Herodotus as Wesseling does, regard the Patmos of Herodotus, the Thoum of Antoninus, and the Pithom of Ex. i. 11 as identical, and all at Lake

Timsch on the extreme eastern boundary of Egypt, whither Joseph would naturally go to meet his father? It would seem so. But this identity is not proved, and modern scholars have been much at variance in regard to it.

Chabas (*Mélanges Egyptol.*, iii. 154) identified Pithom with Tel-el-Maskhuta, about 6 m. west of Ismailia, in the valley of Wady Tumeilat, and near or on the fresh-water canal of Ramses; but afterwards ("Academy," Apl. 24, 1880) gave up this opinion in favor of that of Brugsch, fixing the locality 30 m. further north. He also suggested the identity of Pithom and the Etham of Ex. xiii. 20.

The views of Richter, endorsed by Unruh and Schleiden, have been since advocated by Brugsch with profound erudition and admirable freedom from prejudice. Brugsch finds on both sides of the Tanitic branch a region called in the Egyptian texts the Sethroitic nome. Pithom, identical with Heracleopolis Parva, as proved by the texts, was the chief city of the nome. He puts it at the centre of the nome, 22 miles east of Zoan-Tanis. The latter great city itself, whence Thothmes III. set out to invade Canaan, and into which Ramses II. made his triumphal entry, was, according to the same scholar, no other than the Ramses of Ex. i. 11, and the point of departure of the Hebrews in their exodus (Num. xxxiii. 5). Brugsch's arguments in support of this opinion were given in brief summary, also the opinions of Hengstenberg, Ewald, and the scholars accompanying the French Expedition. After all, in a note in the second edition of his "Egypt under the Pharaohs" (ii. 422), Brugsch admits that he has some doubts as to the site of Pithom.

In the "Academy" for Apr. 24th, 1880, Miss Amelia B. Edwards has a carefully prepared article, in which it is argued that the Ramses and Pithom of Ex. i. 11, necessarily near each other, were both situated in the Wady Tumeilat, at Tel-el-Maskhuta. The principal evidence given for this theory is that derived from her interpretation of the Anastasi papyrus III., of the British Museum. In this papyrus, Pambusa speaks of a Pa-Rameses, as a port at which ships discharged many kinds of rare delicacies, including fish from the Puharta (i. e. Euphrates), and shows it to have been in the vicinity of various lakes, one of which "furnished nitre." It was also adjacent to the Shet Hor, or sacred pool of Horus—a body of water which is also mentioned in an inscription at Karnak. The Karnak text speaks of a canal at the north of this lake. It is claimed by Miss Edwards: 1st, that it cannot be true that ships could bring fish to Zoan-Tanis-Ramses from the Euphrates; 2d, that no lake "furnishing nitre" can be found in that locality; 3d, that the sacred pool of Horus is not there; and 4th, that no canal ever ran north of it in the field of Zoan; but that, on the other hand, all these conditions are fulfilled in the valley of Tumeilat, at Tel-el-Maskhuta. The canal begun by Seti I., and completed by Ramses II., did run north of Shet Hor to the Bitter Lakes, where nitre was found, and thence to Suez; so communicating with the Red Sea, the Persian Gulf, and the mouths of the Euphrates. Hence Ramses, and therefore Pithom too, were not on Lake Menzaleh, but in the valley of Tumeilat. She also suggests that the whole valley of Tumeilat was sacred to Tum, and that possibly its modern name is a commemoration of that fact—not an improbable suggestion.

Just at this point in the search for the ancient Pithom, a new Society is formed in London, called the Egypt Exploration Fund, with Reginald Stuart Poole as Honorary Secretary, Miss Edwards as his assistant, and Edouard Naville of Geneva, who has distinguished himself by scholarly investigations in Egyptology, as the explorer. Certainly no better names than these could be found. Under the direction of M. Naville, excavations were begun at Tel-el-Maskhuta in February last. On the 13th he writes to Mr. Poole: "Tel-el-Maskhuta is the Pithom of Ex. i. 11. I thought so before; now I know it." A week later he writes: "It was only a poor fragment of a limestone statue that definitely settled the question." Now this poor but wonderful fragment of limestone is the statue of a priest, bearing the following inscription: "The chief of the store-house of the temple of Tum of Theku (or Thuku)." This Thuku, it is claimed, is Succoth; for Dr. Brugsch says that $\theta = s$. So that the discovery, it is claimed, not only discloses the site of Pithom, but that of Succoth, the first camping place of the Israelites in their flight from Egypt. Therefore Ramses, from which they started (see Ex. xii. 37; Num. xxxv. 5), must be found not more than a day's march from there, north or west. Moreover M. Naville has found at the mound a Roman milliarium, which indicates

the distance from Clysma to Ero (presumably the Hero of the Itinerary of Antoninus, and the more modern Heroöpolis) as 68 m. p., just as Antoninus says. Therefore Pithom and Heroöpolis are one. Thus M. Naville is supported perhaps by the blunder of the Septuagint as compared with the Coptic version, certainly by D'Anville and Larcher of the French Expedition, by Hengstenberg and Ewald, and by the Wesseling translation of Herodotus. This is no mean support. Lepsius says this is not Pithom but Ramses (Herzog, *Encyc. s. v. Aegypten*).

Mr. Poole, delighted at this discovery, abandons the theory which he elaborately set forth so recently as the beginning of this year, in his "Cities of Egypt," article "Zoan;" and Ebers, Pierret, and Maspero hasten to accept likewise the conclusions of M. Naville. Yet several questions force themselves on our consideration:

1. Where, within a single day's march from Tel-el-Maskhuta, north or west, or in any other direction, are we to look for the great city of Ramses, from which the Hebrews commenced their exodus? If they started from where the greatest number dwelt, as would seem most natural, such was the city of Zoan-Tamis, with its immense and magnificent ruins. This city was called Ramses. Where are the ruins indicating the existence of another city of the same name, within 15 miles of the newly-discovered Pithom-Succoth? 2. The Hebrews went into the desert laden with spoil which they had borrowed from their neighbors. This would be possible, if they started from such a wealthy city as Zoan-Ramses. Where was the city in the valley of Tumeilat in which it was possible to borrow gold enough to make a molten calf? 3. If the buildings at Tel-el-Maskhuta were erected by Hebrews, how happens it that the bricks there, still bearing the cartouche of Ramses II., are wholly without straw, as fully testified by Dr. Schweinfurth? For the Hebrews were obliged to put straw in their bricks (Ex. v. 7-12). 4. Why has neither Antoninus nor Strabo nor any other traveler found in this valley a city called Ramses, or a city called Succoth, while now the locality is fixed only by a poor fragment of a limestone priest? 5. Many scholars, down to the most recent times, have doubted whether Succoth, 'a place of tents,' was the name of any definite locality. We are now told that it means a real place, where much grain of the valley was stored and guarded, with a fort and soldiers. Was it not a strange place for the flying Hebrews to spend their first night in, under the missiles of a hostile garrison? 6. According to Strabo, the Sethroite nome, of which Pithom is the admitted capital, was along one of the two lakes on the left of the great stream above Pelusium (Bohn's ed. of Strabo, iii. 243). Did Strabo know where this nome was? 7. If Ramses and Pithom were in the valley of Tumeilat, the sufferings of the Hebrews, and the wonders performed in their behalf, were there. But Psalm lxxviii. 12. 43 says the wonders were performed "in the field of Zoan." Did the Psalmist know? 8. Granting that the fragment of a limestone statue belonged to a priest of Tum, and that his Pithom temple was Succoth, how does that prove that the place where it was found was Pithom-Succoth, that the priest never lived anywhere but here, or that his statue had never been carried from one place to another? The obelisk in New York has been twice removed.

Mr. Dickerman pointed out in conclusion that his paper was not written in the interests of any theory as to the route of the exodus. But the facts seem to leave us a reasonable doubt whether the site of Pithom has yet been discovered.

3. On the Japanese Nigori of Composition, by Mr. B. S. Lyman, of Northampton, Mass.

The most common phonetic change found in Japanese, Mr. Lyman said, is that of the *nigori* at the beginning of the second part of compound words: that is, the change of the initial from surd to sonant. The word *nigori* means 'turbid,' the Japanese regarding a sonant as merely a modification of the corresponding surd. They even hold that all the sonants in the language are derived from surds; and there are circumstances which give a certain support to this view. The change of *nigori* is not merely euphonic and to be made or not at will, but has to do with the meaning also, and is obligatory.

The rule is, that the second part of a compound takes the *nigori*: i. e. its initial, if *ch*, *f*, *h*, *k*, *s*, *sh*, or *t*, is changed to the corresponding sonant. But the rule does

not apply, 1. when *b, d, g, j, p,* or *z* already occurs anywhere in the second part of the compound; 2. when the second part is a Chinese word; or 3. when the word (though given by Hepburn as a compound) is really made up of words in regular grammatical construction, without ellipsis—such as juxtaposed verbal forms, Chinese words followed by verbal forms denoting doing or action (*shi, suru,* and the like), or words connected by *no* or followed by *to* or *te* or any of the syllables used as terminations of verbal forms; and 4. there are 1002 other cases where the *nigori* is not taken, against over 2200 where it is taken (one in three). Full lists of the words had in view in these rules and exceptions were presented with the paper; they are based on a review of all the words in Hepburn's dictionary, and some hundreds more, or about 23,000 words in all.

If the complete lists of compounds with the *nigori* and without it be carefully examined, it will be found that the change is not made when the first part indicates source or cause, possession, superiority, or pervasion or inclusion of the second part—in short, domination over it as a subordinate thing; and these are the qualities possessed in English by a substantive following the word *of*, as compared with one that precedes. But when those qualities are rather possessed by the second part of the compound, of which the first part indicates a subordinate or partial or occasional characteristic, the *nigori* is taken.

It is clear that the *nigori* arises from the disappearance of a sonant consonant—almost always an *n*, and generally the word *no*, 'of,' but sometimes *ni*, 'in, to,' sometimes the negative *na*, and sometimes other sonants or syllables, as *de*, 'at' or 'with.' It can be hence understood why the sound *n* is so often heard in Japanese before a dental *nigori*, and *m* before a labial one, and still oftener *ng* instead of simple *g*. The significance of such sounds is a strong argument for specially marking them in any system of transliteration: for writing, say, *Nangasaki*, in the time-honored European way, instead of *Nagasaki*.

The rule of *nigori* in composition helps much toward tracing the derivation and meaning of many Japanese words. For example, *nigori* itself, apparently from *ni-ru*, 'resembling,' and *kuro*, 'black;' *hidari*, 'left hand,' is *hi no de uri*, 'direction of the sunrise,' as *migi* (in the country often *migiri*), 'right,' is *mi no kiri*, 'the direction of the cutting off of sight.' It is interesting to see that these words of direction come from the ordinary and favorite southern outlook of houses in that climate.

Mr. Lyman closed with calling attention to the general interest and importance of grammatical investigations of this kind, which are too much neglected, because scholars are so much taken up with translation and interpretation.

4. Remarks on the Oriental Genius, by Rev. J. W. Jenks, of Newtonville, Mass.

Restricting the term "Orientals" to the people of the western half of Asia, their prominent traits were considered, and the following conclusions were arrived at, and confirmed by various evidences: 1. Their traits are those of youth and immaturity. 2. Hence the religion suited to them must be elementary and chiefly preceptive; and their government must be arbitrary. 3. Hence Islam and the Koran are better for them than Christianity and the gospel of freedom; and the example of Christian life is the only way of reaching them and doing them good. 4. As the Koran is derived from the two Testaments, Moslems should be considered as a sect of elementary Christians, unitarians, early "protestants" against three-Godism and the idolatries both of the Christian church and of heathendom, from which they have kept Western Asia in great measure free now for a thousand years. 5. Mohammed professed to and actually did restore the religion of Abraham, the "Syrian nomad" (Deut.)—i. e. a nomadistic religion. 6. For nomadism has always been and still is the pervading characteristic of Moslem countries. 7. The character of nomadism then came under inquiry; and the definition of this "wild-ass man" of Gen. xvi. 12 was adopted from a theologian of the last century. 8. If, therefore, we have ourselves arrived at a more advanced stage of civilization—say humanity's age of adolescence—we should not as Christian nations crouch around the supposed carcass of Islam, waiting for our share of the carrion, but should generously acknowledge fellowship with what is good in the Orientals—should treat them as an older brother treats a younger in a lower stage of education.

5. On the Jāiminiya- or Talavakāra-Brāhmaṇa, by Prof. W. D. Whitney, of New Haven.

During the past year and a half, I have spent no small share of my time upon the Jāiminiya-Brāhmaṇa, and I desire to take this opportunity to give some account of my dealings with it.

It was soon after the lamented Burnell first announced his discovery and acquisition of this important text that, in 1879, I wrote him, begging to have made for me a copy of it, that I might excerpt and use what grammatical material of value it should be found to contain, for the benefit of a possible second edition of my Sanskrit grammar; and I pledged myself not to use it for any other purpose without his express permission. With his usual kindness, he at once promised to have the desired copy made, in *devanāgarī* characters. Soon after, however, as all students of India know, his health broke down, and he was obliged to return to Europe, first temporarily, and then forever. When it was settled that he could not go back, he wrote me that he had not been able to arrange for making the promised copy, but would send me instead his own Grantham texts; and they in due time came into my hands, toward the end of 1881. There was a continuous text of the whole Brāhmaṇa proper, a copy of the Upanishad-Brāhmaṇa with the variants of a second MS., and then a second copy of perhaps a quarter of the Brāhmaṇa text, with the collation of yet another MS. of the first third of this quarter. Never having learned the Grantham character, being unwilling to risk the valuable MSS. again across the ocean untranscribed, and also desirous to retain the text within reach of American scholars, I concluded to make for myself a transliterated copy, which should go finally into the library of the Oriental Society; and that has been accomplished, with the kind and liberal aid of several other members of the Society, who took off my hands about half the task of copying, and to whom mine and the Society's thanks are due for the service—they are Messrs. Avery, Hopkins, Bloomfield, and Perry; (Miss Channing also wrote off a comment by Çankara on the Kena-Upanishad, found at the end of one of the volumes). I, finally, added the collation of the second and third texts of the part of the Brāhmaṇa above specified.

In acknowledging the receipt of the MSS., I had renewed my promise to Burnell to make no use of the material belonging to him save such as should be specifically authorized by him. He did not, however, in his answer to this, any more than to my previous letter, make any reference to this pledge, or express acceptance of it; and from a notice which he sent to the London "Academy" (of Dec. 31, 1881, No. 504, p. 496), to the effect that the MSS. had safely reached my hands, and that I, "he hopes, will be able to extract something of value from it," I infer that he rather regarded himself as having turned over the whole matter to me, to use as I should please. But this I did not feel at liberty to assume; and I wrote him again last summer to ask whether he would allow also the lexical material to be excerpted for the new Petersburg lexicon; and he had not yet answered me at the time of his death.

I give these details, because the statement has been repeatedly made (even in the last Secretary's report to the Asiatic Society at London), that I was going to edit the text of the Brāhmaṇa. Even if I had not my hands already entirely full for some years to come, or felt otherwise prepared for undertaking such a task, the material for a text is as yet quite insufficient, except possibly for some part of the first book. The manuscripts are all quite incorrect, full of false readings of every kind and degree, and of *lacunæ*, longer or shorter; it would hardly be worth any one's while even to try to patch up a conjecturally amended text, until time and search should have shown that absolutely no new MSS. were to be found in India. I have never planned to do more myself than extract the grammatical material; but, being desirous to have whatever is valuable in other ways also as soon as possible worked up, I have, after failing to find in this country any scholar with leisure and disposition to undertake the task, proposed to pass the transliterated copy for the present over to Professor Weber at Berlin, as of all living scholars the one best qualified to deal with it; and a part of it is already in his hands. A very brief general characterization, therefore, is all that will be attempted here.

The Jāiminiya is on the whole a dull and uninteresting work, as compared

with the others of its class. A most unreasonable share of its immense mass is taken up with telling on what occasion some being "saw" a particular *sāman*, and "praised with it," thereby attaining certain desired ends, which may be attained by others that will follow his example; and the *pseudo*-legends thus reported or fabricated average of a degree of flatness and artificiality quite below the ordinary. Of course, there are extensive passages of a different character; and also some of the stock legendary material of the Brāhmaṇa period appears here in a new setting, or a different version, or both. Decidedly the most interesting case of the latter kind, so far as I have observed, is the passage which, with a true insight, Burnell himself selected and published in 1878 as a specimen of his new Brāhmaṇa.* By way of further specimen, and contribution to the same important end, the comparison of the varying versions of common material found in the Brāhmaṇas, I give here another extract, containing a story already well known from the Ṣaṭapatha;† it fills several sections of the third and last of the principal divisions of the Brāhmaṇa proper.

"120. To these the *cyavana*. Cyavana the Bhārgavan knew the *vāstupaṇya* (MS. *vastup*-, *vāstup*-, *vāstupaṇya*) *brāhmaṇa*. He said to his sons: 'I know the *vāstupaṇya brāhmaṇa*; put me down, then, in the *vāstu*, and go forth with thrice repeated departure († *trih punah prayānam*).' They said: 'We shall not be able; we shall be cried out against (*ūkroṣanavantas*); men will say of us "they have deserted their father."' 'Not so,' said he; 'you on your part will be the gainers by it, and I by this means have hopes of becoming young again; just leave me and go forth.' Thus he gave them to understand. They put him down at the *pāṣṭava* of the Sarasvatī, and went forth with thrice renewed departure. He, deserted (?) in the *vāstu*, wished: 'May I be young again; may I win a girl for wife; may I sacrifice with a thousand.' He saw this *sāman*; he praised with it.

"121. When he had praised, Ṣaryāta the Mānavan, with his clan, settled down by (*adhyavāsyat*) him. The young cow-herds smeared him with dirt, with balls of dung whitened with ashes (*śapāṇḍu*). He wrought discord for the Ṣaryātans; then neither did mother know son, nor son mother. Ṣaryāta the Mānavan said: 'Have ye seen anything here about, on account of which this has become thus?' They said to him: 'Surely there lies below here this used-up (*nisthāra*) old man; him the young cow-herds and shepherds to-day have been smearing (*adhikṛus*) with dirt, with balls of dung whitened with ashes; hence this has become thus.'

"122. He said: 'That verily was (*abhūt*, 'has been') Cyavana the Bhārgavan; he knows the *vāstupaṇya brāhmaṇa*; him, now, his sons have left in the *vāstu* and have gone forth.' Running up to him, he said: 'Sage! homage to thee! have mercy, sir, on the Ṣaryātans.' Now there was a beautiful daughter of Ṣaryāta, Sukanyā. He said: 'Do you give me Sukanyā.' 'Not so,' said he; 'name some other treasure.' 'Not so,' said he; 'surely I know the *vāstupaṇya brāhmaṇa*; put her down here by me, and then go (*yātāt*) with your clan this very day at evening.' They [said]: 'How shall we answer thee without taking counsel?' They took counsel, and said: 'Surely, one, two, three treasures we should be willing to gain at cost of her; and now we shall gain just everything by her; come, let us give her to him.' They gave her to him. They said to her: 'Girl, this is a worn-out old man, not equal to pursuing; when, now, we shall yoke up, then do you run (*dhāvātāt*) after.' So she rose up to follow after the clan when it had yoked up. He said: 'O serpent, circumvent her deserting [her] living friend.' As she goes (?)—

"123. A black snake rose up against her. She, noting this, sat down. Now the two Aṅvins, spoon-sacrificers (*darvihomin*), were going about there performing cures, not sharers in the *soma* (*anapisoṃitū*). They came up to her and said: 'This is an old man, not whole, not fit for the office of husband (*pativānāya*); be our wife.' 'Not so,' she said; 'to whom my father has given me, his wife will I be.' This he listened to. Then they went forth. He said: 'Girl, what was that noise just now?' 'Two men came up to me here, with a form that is the

* A Legend from the Talavakāra or Jāiminiya Brāhmaṇa of the Sama-Veda, by A. C. Burnell. Mangalore, 1878; pp. 40, 24mo. Also included in the Acts of the International Oriental Congress at Florence, Vol. ii., pp. 97-111.

† See Muir's Original Sanskrit Texts, v. 250; Weber's *Indische Streifen*, i. 13.

most beautiful of forms.' 'What did they say to you?' 'Girl, this is an old man, not whole, not fit for the office of husband; be our wife.' 'What did you say?' 'Not so, I said; to whom my father has given me, his wife will I be.'

"124. That, now, was pleasant to him; he said: 'Those were the two Aṅvins, spoon-sacrificers, that go about here performing cures, not sharers in the *soma*. They will come to-morrow and say the same thing to you; do you then say (*brūāt*) to them: "You verily are not whole, who, being gods, are not *soma*-drinkers (*asomopāu*); whole in sooth is my husband, who is a *soma*-drinker." They will say to you: "Who is competent to this, that we be sharers in the *soma* (*apisomāu*)?" And do you say (*brūāt*): "My husband here." By this means there is hope of my becoming young again.' They came to her on the morrow, and said the same thing. She said: 'You verily are not whole, who, being gods, are not *soma*-drinkers; whole in sooth is my husband, who is a *soma*-drinker.' They said: 'Who is competent to this, that we be sharers in the *soma*?' 'My husband here,' said she.

"125. They said to him: 'Sage, make us sharers in the *soma*, sir.' 'Very well,' said he; 'do you now make me young again.' They drew him away to the *śūṣṭava* of the *Sarasvatī*. He said: 'Girl, we shall all come out looking alike; do you then know (*jāntū*) me by this sign.' They all came out looking just alike, with that form which is the most beautiful of forms. She, recognizing him . . . 'This is my husband.' They said to him: 'Sage, we have performed for you that desire which has been your desire; you have become young again; now instruct us in such wise that we may be sharers in the *soma*.'

"126. He said: 'The gods here are engaged in sacrificing in Kurukshetra with a victim-sacrifice (*pacīṣṇyāyajñena*); they do not obtain that desire which is the desire at the sacrifice; the head of the sacrifice was cut off; so then what Dadhyañc the Atharvana saw, that do you supply; he will teach it to you; then you will become sharers in the *soma*.' That head of the sacrifice that was cut off is yonder sun; he in sooth is the *pravargya*. So they came to Dadhyañc the Atharvana; they said to him: 'Sage, we would have recourse to thee.' 'For what desire?' 'We would learn about the head of the sacrifice.' 'Not so,' said he; 'Indra likewise saw that; he said to me: "If you were to tell this to any one else, I should cut off your head;" that is what I am afraid of.' 'Then do you teach us with this head of a horse.' 'Very well,' said he; 'let me now see you talking together.' They then laid off his head, put on instead the head of a horse, and sat talking together, singing *sīman*, uttering *re* and *yūjis*. So he put confidence in them, and taught them with that horse's head.

"127. This Indra became aware of: 'He has told it to them,' said he; and running up, he cut off his head, that horse's head. Then what was his own head, that they skilfully (*manisīṇū*) put on instead. They came to the gods, who were sacrificing with a headless sacrifice. They said to them: 'Ye sit sacrificing with a headless sacrifice; hence ye do not obtain that desire which is the desire at the sacrifice.' 'Who knows that head of the sacrifice?' 'We do.' 'Put it on in its place.' 'Then draw a draught for us.' They drew for them that Aṅvins' draught. They said to them: 'Ye two verily are officiating priests; ye, who understand it, shall set on in its place that head of the sacrifice.' 'Very well.' They were officiating priests. Thus they became sharers in the *soma*.

"128. Then Cyavana the Bhārgavan, having become young again, went to Çaryāta the Mānavan, and conducted his sacrifice on the eastern site (*prācyām sthalyām*). Then he gave him a thousand; with them he sacrificed. Thus Cyavana the Bhārgavan, having praised with this *sīman*, became young again, won a girl for wife, sacrificed with a thousand. Those were the desires at that *sīman*; just those desires he attained. With just what desire one praises with this *sīman*, that desire is fulfilled for him. With that same *sīman* Cyavana the Bhārgavan used to draw up out of the *śūṣṭava* of the *Sarasvatī* whatever food he desired. That is a food-attaining *sīman*. He attains food-eating, he becomes the best food-eater of his kindred, who knows this. And since Cyavana the Bhārgavan saw it, therefore it is called *cyavana*. . . ."

Whatever may be thought respecting the extract already published by Burnell (and in regard to it opinions will doubtless differ), it will hardly be denied that this story wears a less original aspect than the corresponding one (or ones) in the other Brāhmaṇa. We cannot, however, be too cautious about expressing sweep-

ing opinions as to the comparative age of the various Brāhmaṇas and their relation to one another, while they are so imperfectly worked up as at present. Their pervading accordance, in language, style, and contents, is the most striking fact about them; they evidently come in the main out of one period, and their differences appear to be of minor consequence. Even from such grammatical indications as that the Aitareya Brāhmaṇa uses *āram* as nominative, makes a periphrastic perfect with *āsa* (known elsewhere only in the Gopatha, and occurring but once even in the older Upanishads), and has such forms as *hvayta* and *kāmayita* (common enough in the Sūtras, but among Brāhmaṇas paralleled only by *kalpayita* in the *Kāushītaki*), we should doubtless be over-hasty in concluding that the Aitareya is a more recent compilation than the rest.

In point of language, the Jāiminiya stands fully upon the general plane of the Brāhmaṇas, offering no signs either of special antiquity or of more modern date. Thus, to specify a few points: it invariably (and not very rarely) uses as nominatives *āram* and *yuram*; it makes its periphrastic perfects with *kr* only (a new case is *apacūyīm cakrus* 'reverenced;,' and *iyaksām cakre* occurs three times, in the sense of *īre*; the text has no examples of aorists of this formation); it has no optatives like *kāmayita* (still less any participles like *kāmayāna*, which seem to be absolutely wanting until the epic period); it uses the aorist strictly to express time just past (and hardly offers an instance of what Delbrück calls the *zeitlos* use, or equivalence with a present); its infinitives are in their variety and proportional frequency like those of the Çatapatha and Aitareya; it employs the subjunctive with freedom (although its variety of forms is decidedly less rich than that of the Çatapatha); its imperative in *tū* has as regularly a future sense as in other Brāhmaṇas (some of the best examples are those in the extract given above); it has such 3d sing. pres. middle forms as *duhe*, *īre*, *ḡye* (which Aufrecht, Ait. Brāh. p. 429, incautiously pronounces "imitations of Vedic forms," though no Brāhmaṇa is found without them); its gen.-abl. sing. fem. is in *āi* instead of *ās*; and so on. Its unusually frequent omission of the augment is probably to be regarded as due to the inaccuracy of the manuscripts; they vary greatly in regard to it.

Of new and interesting grammatical material, the immense text is decidedly barren, more so than any of the other Brāhmaṇas except perhaps the *Kāushītaki*. But the mass of literature from this period already at command was so considerable, that not much that is novel was reasonably to be hoped for. The text is so faulty that some things are doubtless hidden which further collation or deeper study may bring to light. A very few new aorists appear: as *amīsat*, *amrucat* (doubtful), *alūkuhat*, *anūmarat* (not noted before in the older language), *āpsit*, *avūrt*. Precative forms are made from only half-a-dozen roots. As usual, the *s*-aorist is most frequent, being made from over thirty roots (the *is*-aorist, from about half as many); of the *sa*-aorist, only two or three scattering forms appear (the mongrel *adhikṣus*, in the extract given above). Desiderative stems are nearly three times as numerous as intensive; of special interest in the two classes are *tistīṣa*, *jigūsa* (*gū* 'sing'), *dhīpsa* (besides *dīpsa*), *verīṣya*, *tūtrasya*, which are new; and *cichīṣa*, *vivadiṣa*, *leliḥ*, *nānadya*, which I have not hitherto found of Brāhmaṇa age.

A new root, *gūrda*, seems to make its appearance at iii. 171, in accounting for the name *gūrda* given to a *śīman*. We are told that when the gods and Asuras contended about food (*annādya*), and the gods got possession of the Asuras' food, there was left to the Asuras a great food named *gūrda*, which the gods coveted. Accordingly (as nearly everywhere through the Brāhmaṇa), 'they saw this *śīman* and praised with it; and thereby they won the *gūrda* food of the Asuras;' and then: *tasminn agūrdan* ('rejoiced, made merry?'); *yad agūrdans tad gūrdasya gūrdat am*. In another passage (iii. 92), *śsadh* is apparently a variant or an error for *śsadh* (which the grammarians give as of the *nu*-class, although no *nu*-forms have heretofore been found): thus, *indro vūi simā nū 'sadhnōt*; so *kāmuyata*; *simā sadhnuyām iti*; *sa etat simā 'puṣyat*; *tenū 'stuta*; *tuto vūi sa simā asadhnōt*; *tad yad etat sima bhavati, simānam eva sadhhyai*. The rare root *nel* occurs repeatedly, both with *atī*, as in the examples hitherto found, and with *pra* (*tasya yo rasah prā 'nedat*, etc.)

I will only add further that the familiar later word *ādī* makes its earliest appearance here (it had been found till now no further back than in Upanishads

and Sūtras), and in constant connection with forms of $\bar{a} + \sqrt{d\bar{a}}$, showing that the derivation conjecturally given for it in the Petersburg Lexicon is unquestionably the true one. Examples are: *teno eva punar ādim ādatte* (i. 120); *ho ity uktvā "dim ādadita* (i. 130); *hin kurvanti... prastūti... ādim ādatte... udgāyati... pratiharati* etc. (iii. 304).

It may be mentioned, however, in conclusion, that the word *cākvāla*, put forward by Burnell as older form of *cakkavāla*, is (as conjectured by Böhtlingk in his minor dictionary) only the familiar *cātvāla*. The groups *tv* and *kv* are hardly distinguishable, and often confounded, in the Grantham manuscripts; but what they give here is pretty clearly meant for *tv*.

6. On Modes in Relative Clauses in the Rig-Veda, by Prof. J. Avery, of Brunswick, Me.

In a paper read before the Society in May, 1881 (see the Proceedings for that meeting, Journ., vol. xi., p. lxiv.), a statistical exhibit was made of the position of relative clauses in the Rig-Veda with reference to their corresponding antecedent clauses—understanding by relative clauses those introduced by the relative pronoun or relative adverbs of time, place, etc.

It is my design in the present paper to conclude the survey of these clauses by some statements regarding the modes of the verb employed in them. This portion of the subject has already been treated at some length by Delbrück in his work on the Use of the Subjunctive and Optative in Sanskrit and Greek: but as I have a list of all the occurrences of relative clauses in the Rig-Veda, and have examined them independently, it may not be superfluous to give my own impressions regarding their characteristics; especially as I shall endeavor to state exactly (as Delbrück has not done) the relative frequency of the various uses of the modes, and shall give a list of all occurrences except for the indicative. The advantage of a full citation of passages is obvious, since, in the present condition of syntactical studies on the oldest texts, interpretations and classifications must be considered open to amendment. The uses of the modes are so lacking in clear definition, and their forms even are so often doubtful, that no treatment of the subject can be accepted with confidence which is not accompanied with an ample list of illustrations, so that each scholar may interpret them for himself.

Now in regard to the modes in relative clauses, it may be said, in the first place, that all the modes of the finite verb—indicative, subjunctive, optative, imperative—are represented in them; and that the frequency of their occurrence is in the order named. To these may be added a single example of the so-called conditional tense, or preterit from the future-stem.

As in other languages, the indicative is the mode found in the great majority of instances, claiming in the Rig-Veda about 88 per cent. of the whole number. In general, the familiar Greek rule prevails: that the indicative is used when the antecedent of the relative is definite, unless the general sense of the passage requires another mode. After an indefinite antecedent, in conditional clauses, the same mode is not uncommon; but in a majority of cases the subjunctive—less often the optative—takes its place. The following are a few examples: 'All that is auspicious which the gods favor' (*āvanti*) (ii. 23.19); 'No one harms him from near or far who is (*bhāvati*) under the guidance of the sons of Aditi' (ii. 27.13); 'He gains every kind of treasure whom thou furthest' (*invāsi*) (v. 28.2); 'Fortunate beyond (others) let that man be (*astu*) who is obedient to (*rikṣati*) thy laws' (iii. 59.2). Occasionally the subjunctive and indicative are coordinated without any evident change in sense: e. g. 'who despises (*manṣate*) us. Maruts, or scorners (*manīsāt*) the prayer when made, his faults shall be flames to him' (vi. 52.2). Other examples of the indicative after an indefinite antecedent are: i. 141.6; ii. 25.1; 26.3; viii. 18.13. In one passage, iii. 4.9 (*yito virāḥ... jā'yate*), we find the indicative where the subjunctive in a purpose-clause would seem much more appropriate.

Next to the indicative, the subjunctive most frequently occurs in relative clauses. It is found about 316 times, according to my understanding of the forms. It is fair to say, however, that owing to the identity of the 3d form of the subjunctive with the augmentless preterit, and to the fact that the subjunctive in Sanskrit does not as in Greek take a servile particle, nor does the relative assume a peculiar form,

such lists are liable to some amendment; still, in most instances the requirements of the context make the sense sufficiently certain.

The various uses of the subjunctive in relative clauses we will treat under four heads: Subjunctive in Conditional clauses; Subjunctive in Purpose-clauses; Subjunctive of Will; Subjunctive for the Future. The order of these categories also represents the relative frequency of their occurrence. The first is found about 241 times, the second 42 times, the third 17 times, the fourth 10 times. A few doubtful cases are not counted here. As in Greek, conditional clauses with the subjunctive may be divided into general suppositions and particular suppositions. In the first instance, the subjunctive is indefinite as to time, and is best translated by the present indicative; the verb of the antecedent clause is in the present indicative, or if in the aorist or perfect, it is used in a gnomic sense. A few examples will illustrate this usage: 'I hear their whips whenever they crack (*vádān*) in their hands' (i. 37.3); 'What mortal delights (*rārānat*) in thy friendship, divine Soma, him the wise seer attends' (i. 91.14); 'What mighty ones seek to win (*āvīrāsān*) thy favor, victor, with hymns; having spread the *barkis* for a seat, supported by thee, Indra, they come (*agman*) to riches' (ii. 10.16); 'They call him sinful who approaches (*nigīchat*) his own sister' (x. 10.12). In particular suppositions, the verb of the antecedent clause takes a mode referring to the future; the verb of the relative clause also has a distinctly future sense, and may often be best translated by our future-perfect. Examples are: 'When thou shalt have cooked (*kīrasi* *ṛtīm*) him, then give (*dattāt*) him over to the fathers; when he shall have come (*gāchātī*) to the spirit-world, then he shall become (*bharātī*) a servant of the gods' (x. 16.2); 'Whoever shall have worshiped (*dāṣyāt*) thee, him no harm shall reach' (*agnarāt*) (ii. 23.4). This use of the subjunctive to express a general or particular supposition after a primary tense is accordant with Greek syntax; but I find no example of the rule that the optative shall follow a secondary tense. In the one or two passages where the perfect occurs in the principal clause, it manifestly has a present sense: and we shall find when we come to speak of the optative, that it is used precisely like the subjunctive. Another interesting deviation from Greek usage is, that while in the latter the indefiniteness of the antecedent is indicated by compounding the indefinite pronoun with the relative, and by the use of *āv* with the subjunctive, in Sanskrit, on the other hand, such devices to aid in understanding the sense are employed almost without exception when that is not sufficiently clear from the mode of the verb: that is to say, when it is in the indicative. I am able to cite but a single example where such words are used with a subjunctive: viz. 'Whenever (*yada* *kadā* *ca*) we express (*sunāvāma*) the Soma, let Agni as messenger hasten to thee' (iii. 63.4). With the indicative may be cited vi. 75.6 (*yātra-yatra kāmīyate*); viii. 82.4 (*yād adyā kīcca . . . udāgū abhī*). In other elliptical expressions (vi. 46.8: x. 19.7; 20.8; 90.10; 97.10), the verb to be supplied is manifestly an indicative.

The next most common use of the subjunctive in relative clauses is to denote purpose. Such clauses being identical in form with hortatory clauses, the line between them cannot be very closely drawn. Both express the will of some person—commonly in this text that of the speaker. The following are examples: 'Bring us heroic power by which we may conquer (*vānsāma*) enemies in battles' (vi. 19.8); 'Give riches . . . by which we may subdue (*ubhī krāmāma*) men who are godless enemies, and may overcome (*abhy aṣṇāvāma*) godless tribes' (vi. 49.15); 'Which shall carry (*pīparat*) us across the darkness, O bright Agvins, that power give us' (i. 46.6); 'I make for him a new, lordly song to (lit. which shall) please (*jūjoṣat*) him, in order that (*yāthā*) he may hear (*ṣṣāvat*) us' (vii. 26.1). In the last passage we seem to have the two ways of expressing purpose in the same verse. In the majority of purpose-clauses expressed by the relative pronoun and the subjunctive, the antecedent is indefinite. When the antecedent is definite, *yāthā* or *yid* is employed. The propriety of this usage is obvious: since, when the antecedent is indefinite, the relative clause is needed to define more fully its character. But there is nothing in the nature of such clauses to forbid their use after definite antecedents, and they are sometimes so employed in Greek. We cannot, then, quite agree with Delbrück's remark that relative purpose-clauses occur only after indefinite antecedents—at least, if our understanding of certain passages is correct. For example: 'Drive forth that victorious chariot of thine, that we may hail (*anumādāma*) it (lit. which we may hail) in battle' (i. 102.3);

'Let your favor be turned toward us, that it may give (lit. which may give) great relief (*varivovūtarā ūsat*) from distress' (i. 107.1); 'Hurl down from heaven thy thunderbolt, that with it thou mayest (lit. with which thou shalt) merrily burn down (*nijū'rvāḥ*) the enemy.'

In certain passages, the verb seems to express more directly exhortation, obligation, or, more mildly, prayer. These cases I have called, with Delbrück, the subjunctive of will. They shade off on the one side into purpose-clauses, and on the other into expressions of futurity. Examples are: 'Praise the Agni of Deva-vāta, O Devaṣṭavas, who shall be (*ūsat*) the lord of men' (iii. 23.3); 'May the chant exalt Indra, which Indra may the offering and Soma exalt (*vārdhāt*); the prayer, song, hymn, devotion exalt' (*vārdhāt*) (vi. 38.3. 4). In viii. 20.15, we seem to have an interchange of clauses. As it stands we must read, 'He was fortunate by your aid in former dawns, Maruts, who shall be (*ūsatī*) so now also.' The more natural form would be, 'Whoever was fortunate by your aid in former dawns, may he also be so now.'

In expressions of will, it is said that the will resides in the first person, and that obligation expresses the condition of the second or third person. We can quote one passage where the subjunctive seems to represent an obligation resting on the first person: 'Tell me, ye gods, by what path I ought to bring (*vāhāsi*) the oblation to you' (x. 52.1).

The last use of the subjunctive in relative clauses which we shall note is that in which it approaches the sense of the future indicative. This use is appropriately called by Delbrück the subjunctive of expectation. It is common to speak of it as a softened, i. e. a doubtful, future; but I question whether the Vedic usage does not lie nearer to the primitive idea of the subjunctive, that of will, rather than to the later and weaker sense of contingency. Thus, i. 113.11, after speaking of the appearance of the dawn to the men of old, and its present rising before his eyes, the poet adds: 'Those are coming who shall see (*pāryān*) her hereafter.' To his mind, no phenomenon of nature is so unfailing as the recurrence of the dawn; and the firmness of his confidence is expressed by the subjunctive. A passage where the sense is not quite so obvious is vii. 87.7: 'We long to be guiltless before Varuṇa, who will (assuredly) pardon (*mṛṣyānti*) him who hath committed sin.' Here the worshiper seems to express unflinching, child-like trust in the loving compassion of the god. This use of the subjunctive is not of frequent occurrence.

A few cases of improper subjunctives are not included in the above classification; they are perhaps rather to be understood as indicatives.

The optative, as a comparatively infrequent form, occurs in relative clauses far less often than the subjunctive; still it not only is occasionally found in its proper sense of wishing, but it also begins to usurp the functions of the subjunctive, which it has mainly supplanted in the later language. 1. The optative of wishing: 'Receive this prayer of mine, Maruts, by whose power we wish to live (*āirema*) a hundred winters' (v. 54.15). This passage might be easily understood as a purpose-clause. 'To us, who wish to conquer (*śānema*) by thy aid, . . . thou didst give over Viṣvarūpa, Tvastar's son' (ii. 11.19). 2. The optative in conditions: 'Let the mighty bull roar . . . whenever he is aroused' (*jūjyā't*) (i. 173.2); 'What priest knows (*vidyā't*) the solar hymn, he deserves the bride's garment' (x. 85.34). 3. The optative in purpose-clauses: 'Grant us renown in heroes, by which we may outshine (*citāyema*) others' (iv. 36.9); 'Bring hither great riches, Agni, by which we may have enjoyment' (*māidema*) (vii. 1.21). 4. The optative of expectation: 'I wish to ally myself with the kind friend who will not harm (*rāsyet*) me' (viii. 48.10).

The imperative scarcely occurs in relative clauses, being found but once in its proper form, at i. 127.2: 'We wish to invoke thee, the flame-haired bull, whom let all these tribes urge on (*prā'vantu*) to haste.' There is, however, one other passage in which a quasi-imperative is used, i. 63.8: 'Do thou, divine Indra, make this sparkling libation flow around like floods of water, with which grant (*yānsi*) us life.'

As we have noticed already, the conditional form of the verb occurs once: ii. 30.2.

After this compendious statement of the modes used in relative clauses, and the principal senses in which they are employed, I have only two remarks to add: 1. It appears that in conditional relative clauses the mode of the verb is not deter-

mined by the tense of the verb in the antecedent clause; 2. As might be expected, the order of the clauses has no effect upon the modes. On the contrary, the nature of the relative clause seems to have an influence upon the order; for while on the whole the antecedent clause stands first in a small majority of cases, yet in relative conditional clauses, in which the relative clause precedes in order of thought, it precedes in position also in about the ratio of $1\frac{1}{2}$ to 1. On the other hand, in purpose-clauses, where the relative clause follows in order of thought, it follows in position also almost invariably.

LIST OF CITATIONS.

Sub. in rel. cond. clauses (antecedent indefinite), i. 27.7²; 30.15; 35.6; 37.3; 42.2; 46.3; 48.15; 54.5; 63.2: 68.6²; 70.6; 71.6²; 73.8; 77.2, 4; 82.1; 84.16; 86.7; 91.14, 20; 93.3, 8; 94.15²; 100.11; 101.8; 113.10; 121.7, 12; 122.12; 123.3; 127.7; 132.5, 6²; 139.1, 8; 156.2²; 164.16; 165.7, 10; 166.14? 167.2; 169.4; 174.4; 179.3; 180.1, 2; 186.9: ii. 1.15; 11.3, 16; 14.8; 23.4, 7, 14, 15²; 30.1, 7⁴; 31.2; 34.10: iii. 6.7? 8.1²; 10.3; 30.5; 51.11; 53.4: iv. 2.6², 7⁴, 8², 9², 10²; 4.10; 11.2; 12.2; 16.11, 17²; 23.4; 24.7², 10; 41.11; 42.6²; 55.2: v. 3.5, 7; 4.11; 27.4; 29.13; 30.3; 33.2; 37.5; 42.10; 49.4; 50.4; 56.2; 60.6; 62.6; 73.5; 79.7: vi. 2.4, 5; 4.1; 5.4²; 9.3; 15.14; 25.4², 6, 7; 26.1; 45.14, 23; 46.13; 52.2; 56.4; 59.4; 60.1; 67.8, 11²; 68.4: vii. 16.7; 20.6, 7, 8; 25.1²; 30.3², 4; 32.5, 7, 11, 13; 40.1, 3; 42.4; 47.2; 50.2; 56.22; 57.4; 60.11; 65.2; 66.4; 70.6; 85.4; 88.3², 6; 93.3, 5; 98.4²; 100.1²; 103.4: viii. 1.31; 13.6², 28; 19.14, 30; 31.1⁴; 45.6; 50.12? 55.4; 58.7; 69.9; 82.28, 29, 30; 85.12; 89.1; 92.4: ix. 72.2; 102.5: x. 2.3, 4²; 3.2; 10.11², 12; 11.7, 8²; 12.1, 4, 6²; 15.6; 16.2², 11; 27.10, 11; 31.10; 37.5; 43.5; 45.9; 50.3; 53.8; 61.4, 23; 87.13²; 91.11; 93.5; 96.12; 96.9; 97.17; 99.8; 148.3; 155.1 = 241.

Sub. in purpose-clauses—indef. ant., i. 8.1; 46.6; 140.12; 166.14: ii. 38.11: iii. 13.4: iv. 41.1? v. 23.1; 37.3: vi. 16.36; 19.8; 33.1²; 48.12; 49.15²; 68.1: vii. 26.1; 53.3; 56.15: viii. 1.8²; 6.24; 19.15; 27.22; 49.12: ix. 9.2; 97.51; 101.9: x. 44.9; 63.6; 68.10; 85.37²; 98.3; 113.10 = 36. *Def. ant.?* i. 102.3; 107.1: ii. 20.3; 30.5: iii. 62.10: viii. 19.20 = 6.

Sub. of will, i. 70.8; 176.5; 185.6: iii. 23.3; 33.8: vi. 17.11; 22.10; 38.4²: vii. 61.2: viii. 20.15? 24.27: ix. 108.14: x. 29.8; 52.1² = 17.

Sub. of expectation, i. 113.11: iv. 55.2: vi. 12.2: vii. 87.7: viii. 92.11: x. 10.10; 53.9; 74.4²; 96.8 = 10.

Doubtful cases, i. 100.14: iii. 44.3: vi. 12.5: vii. 56.16: viii. 2.39; 60.11.

Optative of wish, ii. 11.19: v. 54.15: vi. 19.7: vii. 3.7; 56.24. — *condition*, i. 173.2: v. 34.8: vi. 16.46: viii. 19.11: x. 85.34. — *purpose*, i. 30.13: iv. 36.9: vii. 1.24: viii. 40.1. — *expectation*, viii. 48.10.

Imperative, i. 63.8 (*yañsi*); 127.2. *Conditional*, ii. 30.2.

Totals: Subjunctive, 316; Optative, 15; Imperative, 2; Conditional, 1.

7. On certain Irregular Vedic Subjunctives or Imperatives, by Prof. M. Bloomfield, of Baltimore, Md.; presented by Prof. Lanman, of Cambridge.

The Vedic forms referred to are those of the types *stōta*, *jūhōta*, *kṛhōta*; *étana*; *kīrta*, *tyāta*; *gānta*; *āddāta*; *undāta*—appearing at first sight to be so-called imperfect subjunctives, but having irregularly strong stem-forms with accent on the stem, instead of on the ending. The words of this form occurring in the Rig-Veda were first stated, with their number of occurrences in that text. They have been (by Delbrück and Whitney) regarded as simple variations of the regular forms *stutá*, *juhuká*, etc., perhaps under government of the belief that they were the product of metrical needs. But this seems wrong; because the short vowel would rather have been lengthened to make it suit the iambic cadence, nor would the accent have been shifted: cf. *yuyopimá*, with metrically altered root-vowel but unchanged accent (reg. *yuyupimá*). It is indisputable that the forms originated in some way from metrical needs. A detailed examination (given in full in the paper) of the passages where they occur shows that, for example, of the 66 occurrences of forms with irregular *o*, 35 occur in the cadence of the verse, where a long vowel is most imperatively demanded, and most of the remainder where the heavy syllable is either required or strongly favored; and the same thing is substantially true of the other classes of the words under dis-

cussion. The forms showing an *a*, it was urged, are particularly calculated to make it improbable that the category represents a modification of augmentless subjunctives; since, for example, *punī'ta* and *punītā* are metrically equivalent; while *dddāta* etc. are so remote in form and accent from *dattā* etc. that their supposed formal correlation is extremely improbable.

The following theory of the formation was then proposed. In the division of subjunctives with mode-sign *a* and secondary endings, if we look at Prof. Avery's lists of forms from the Rig-Veda, we shall be struck by the fact that the 2d and 3d dual, and especially the 2d plural, are entirely unrepresented. The exclusion of so important a case as the 2d plural from an otherwise well-developed category is *a priori* improbable. It is even not to be doubted that just here must be sheltered such forms as *punī'ta* and *dddāta*, which are in all respects regular subjunctives save that their ending is secondary. And this furnishes the key for the others also. If we look over the subjunctive forms possible from a stem *ṛṇu*, for example, we find *ṛṇutā*, *ṛṇāvatha*, and **ṛṇāvata*. It is seen at once why an additional form was needed: none of these, being of four light syllables, is fit for use in iambic cadence. Nothing is more natural than that the least usable among them, **ṛṇāvata* (since *th* at least occasionally makes position), should be remodeled. Accordingly, forms like *ṛṇōta*, *juhōta*, *étana*, *kāta*, are to be regarded as contracted or apostrophized from the hypothetical *ṛṇāvata*, *juhāvata*, *áyātana*, *kārata*. This may be urged with especial emphasis for the *o*-forms; for the metrical correlation of *ava* and *o* is established by many instances which cannot be impugned. A few cases of such correlation were given as examples, the point not having been fully worked up. Thus the "weak" stem *maghon-* for *maghavan-*; and *maghavan* has even sometimes to be read for written *maghon*, as at RV. vi. 65. 3; as *gāvas* for *gós* (i. 181. 8), *ivasadhisu* for *ósadhisu* (vi. 3. 7), and *rāvadasi* for *ródasi* (i. 62. 7); and *stāvante* seems clearly to require to be read *stōnte* at vi. 26. 7. Compare also vocatives like *aghos* and *bhayos* from *aghavas* and *bhagavas*, and the relation of *ṛṇoṇa* to *ṛavāṇa*—without resorting to such doubtful etymologies (BR.) as *oṣtha* from *avastha*. Analogous is the correlation of *avi* with *ā*: *sthūvirasya* is to be read as *sthū'rasya* at RV. vi. 18. 12, and *sthā'ram* as *sthāviram* at vi. 19. 10. Compare the contraction of causative *aya* to *e* in Prakrit. Cases in which original etymological *ara* and *ana* become *ar* and *an* are not, to be sure, found; but extensions of *ar* or *ra* to two syllables are well-known; and cases have been pointed out in which *na* is to be read as *ana*.

The points, then, which cause the explanation here given to be proposed with some confidence are these. The language furnished no iambic forms for these persons; they had to be supplied by some secondary process. These very cases are wanting in the scheme of the subjunctive; and a form like *ṛṇōta* is the most natural modification for metrical purposes of *ṛṇāvata*. As negative evidence may be added that the forms in question do not occur with the negative *mā*—which is in accordance with the fact that *mā* is used with the augmentless and not the thematic subjunctive. The single exception (RV. ii. 30. 7) is one of the two cases where *o* occurs in a syllable which is more usually light.

At first sight, the whole theory seems endangered by the fact that there are also augmented imperfect forms (as *akṛṇotana*, *ākūrta*, *ājaganta*, *ādadāta*, *ābravātana*). But it is *a priori* not unlikely that on the analogy of forms like *kṛṇōta* and *kṛṇuta* there should be formed an *akṛṇōta* to *akṛṇuta*. Moreover, these imperfects, not numerous, occur under peculiar conditions. Of the 14 occurrences, 10 are found in the 1st and 10th Books (5 in the *ṛbhu*-hymn i. 161); 3 in the *ṛbhu*-hymn iv. 35; the remaining one at vii. 33. 4.

Prof. Bloomfield's paper closed with the expression of an intention to work the whole subject over again as soon as other engagements permitted, and with an invitation of criticism and suggestions.

In response to the author's request, Prof. Whitney offered some remarks upon the theory. Prof. Bloomfield was mistaken, he said, in supposing that his grammar intended to suggest a theory as to the character and origin of these forms; he had been careful simply to note and describe them, as forms showing the ordinary characteristics of a strong stem where a weak one was to be expected. Especially was it far from his thought that the irregular forms should have been called out by metrical needs, since he utterly disbelieved in such an originating cause. If a Vedic verse-maker has two equivalent forms to use, as *kṛṇutā* and

krñóta, he will naturally put each of them into the place which it fits, or where in the loose and easy structure of Vedic metre it can be tolerated; and the detailed discussion of the metrical uses of the two classes of forms in the paper was nothing but an illustration of this innocent fact, and had no force to prove anything. If there is only one form, as *krñutí*, the poet puts it where it can go, and fills up the rest of the verse with something else. To assume that there is anything in the metrical form of *krñutá* which leads to the creation of a *krñóta* for other metrical places seemed to the speaker inadmissible, and he was glad to take this opportunity to protest earnestly against it, since it is by no means uncommon. No small part, for example, of Benfey's interminable discussions of the *pada*- and *samhitá*-differences of reading in Vedic texts was in his opinion vitiated by it; and it would be easy to refer to other examples. Of course, like everything else of the kind, the metrical convenience of doublets like *krñóta krñutá* is liable to be extended beyond its natural limits; an unskilful versifier will make, for example, a *kuróta* beside *kurutá*; and such things will be done the more, the more unvernacular the language and the more artificial the style. So, in view of the widely prevailing equivalence of active and middle forms in Sanskrit, the epics unquestionably sometimes, purely *metri causá*, say e. g. *bhavate* for *bhavati*; but they would never think of saying *bhavatí*, because there is no genuine form like the latter. So also, doubtless, there are some inorganic cases of final *ā* for *a* in Vedic words; but it is because there are so many real cases of variation in quantity of the final vowel to serve as justification of the protraction. And in the discussion of such double forms, one should never be content to say "this is metrical," which means nothing and explains nothing; the question should rather be: is this a historical form, or is it only the imitation of such, made upon this or that analogy? If one is allowed simply to plead that a given heavy vowel is explained by the metre, there is nothing in the way of our admitting a set of variant forms for every word in the language, fitting it to all the conceivable exigencies of metrical use.

As regards, also, the filling-in of a theoretically deficient scheme of subjunctive inflection, Prof. Whitney was disinclined to admit the suggestions of the paper. Instead of lists of forms from the Rig-Veda alone, the paragraphs (560, 562) in his grammar devoted to this point might well have been consulted and referred to by Prof. Bloomfield, since they state the facts of subjunctive formation as derived from the whole body of literature, both Veda and Brāhmaṇa, in which subjunctives occur. It is only in two active persons, the 2d and 3d singular, that thematic subjunctive forms are made with both primary and secondary endings; in four of the remaining persons only with primary, and in three only with secondary. Among these seven deficient persons, there would seem to be no good reason for selecting one or two whose deficiency should be painfully felt and sought to be supplied; we might, for instance, as naturally expect a *krñāvāmas* and *krñāvānti* and *krñāvam* to be added as *krñāvata*. The explanation of the strange distribution of endings in the subjunctive active, while in the middle they are almost exclusively primary, is still to seek; but by the assumption of double forms in the 2d plural it does not appear to be brought any nearer.

But further, the paper does not take account of all the forms which might claim the right to be brought into the discussion. There are in the imperative a number of 2d persons singular also, made upon the strong instead of upon the weak stem: in the Rig-Veda, *yuyodhi* and *śīśādhi* (to which may be added *edhi*, if, as generally believed, it comes from *as-dhi*); from other texts, *grñāhi*, *grñāhi*, *punāhi*, *śrñāhi*, *śrñāhi*, and the middle *rarāśva*; and the augmentless quasi-subjunctive *yuyothās* (RV.) should be mentioned with them. There can be no question here of contracted subjunctives; they are simply forms made with the usual ending, from the strong stem: and if the 2d singulars, why not the 2d plurals likewise? There is at least a *prima facie* probability that all these irregular second persons belong together, and are to be explained together.

Objection is also to be made to the treatment of such forms as *kārta* and *gānta* on one plane with the rest. These do not belong to the present-system, but to the root-aorist; and although this is in its inflection mainly accordant with an imperfect of the root-class, yet (as pointed out in the grammar, § 831-3) its stem is especially liable to irregular strengthening, and about as large a proportion of

the forms in the first person plural show the strong stem as of those in the second.

For these reasons, while acknowledging the ingenuity of Prof. Bloomfield's theory, we can hardly accept it as satisfactorily explaining the irregularity with which it deals.

8. Was there at the head of the Babylonian Pantheon a deity bearing the name *El*? by Prof. D. G. Lyon, of Cambridge, Mass.

This question is one of no small interest, and has been variously answered. The affirmative has been espoused by most writers on the Babylonian religion, including some of the best Assyrian scholars. On the other hand, Prof. Tiele, in his *Histoire Comparée des Anciennes Religions* (pp. 181, 182), denies the validity of the argument; and very recently, as a correspondent from Germany has informed us, Prof. Fr. Delitzsch has also surrendered his belief in a Babylonian *El* (cf. the "Hebrew Student," Morgan Park, Chicago, for Feb., 1883). Yet *El* still has his friends. Prof. Schrader of Berlin and Prof. G. Rawlinson of Oxford have reaffirmed his existence in two works published during the current year (Schrader: *Die Keilinschriften und das Alte Testament*, ed. 2, p. 11; Rawlinson: "The Religions of the Ancient World," pp. 37, 38).

This paper will first attempt to show that Rawlinson's proof is based on mis-translations, and will then examine some other grounds claimed for the existence of a god *El* or *Il*. Rawlinson is himself evidently not acquainted with the Assyrian literature in the original, but has taken all his translations at second-hand. Still, his book purports to be scientific in its methods, to give only facts without theories: in his own words, to collect "materials which may serve as a portion of the data, when the time comes, if it ever comes, for the construction of the science in question"—i. e. the "Science of Religion" (p. 3). His book then is professedly critical, and in it he asserts the existence of a Babylonian *El*, or rather *Il* or *Ra* (pp. 37, 38). His proof-texts are found in the faulty translations of "The Records of the Past." He confesses indeed that the very name of the supposed god *Il* "is not of frequent occurrence." In a foot-note (p. 37) he gives several references to the "Records."

The first is translated in the "Records" (v. 21): "From all the enemies of Ashur, the whole of them, I exacted labor. I made, and finished the repairs of, the temple of the goddess Astarte, my lady, and of the temple of Martu, and of Bel, and Il, and of the sacred buildings and shrines of the gods belonging to my city of Ashur." The original text (I. R. 14.85 ff.) should be translated: "After I had subdued the enemies of the god *Ashur* in all their boundaries, I restored and finished the temple of *Ishtar* of *Ashur* (?), my lady, the temple of *Raman*, the temple of *Mullabara* (?), the house of divinity (?), the decayed temples of my city *Ashur*." What here concerns us is the expression *bit ilu Mullabara*, written *bit an en à ra*. The translation of the "Records" seems to take *en* with the preceding *ilu* as an ideogram with the value *Bél*, which it often has; to take *à* as the connective, certainly its usual value; and to understand *ra* as an ideogram representing the god *Ra* or *Il*. It would be a sufficient objection against thus dividing the signs *en à ra* to point, with Dr. Lotz, in his comment on this combination (*Die Inschriften Tiglathpilesers* I. p. 168), to another list of gods where the name of this deity occurs (III. R. 66, obv. 5 b). Lotz gives also his grounds for reading the name *Mullabara*. But if this second passage were unknown, the translation in the "Records" would still be very improbable, because both the word *bit* 'house, temple' and the determinative *ilu* 'god' are wanting before the sign *ra*: proof that *ra* could not as an independent word be of the same class as *Ishtar* and *Raman*, and consequently not the name of a deity. And even if *ra* here did represent a god *Il*, he would be only a member of the Assyrian Pantheon. This passage then would prove absolutely nothing for a Babylonian god *Il* or *El*, except so far as his existence might be inferred from his presence in the Assyrian Pantheon.

The second reference might seem to lend more support to Rawlinson's theory ("Records" v. 129). The original reads (I. R. 56, col. 7, l. 13; I. R. 57, col. 7, l. 14, 15): 'The many kings preceding me whose names *ilu* appointed unto royalty.' If the text here be correct, we might translate *ilu* by 'the deity,' or understand it to be the name of a god *Il*. The latter would, however, only be admissible if we

had independent evidence of *Il's* existence. But the highest god in the Babylonian pantheon of Nebuchadnezzar was undoubtedly *Marduk*, and the passage is from one of this king's inscriptions. It is to *Marduk* that the same text gives such titles as *bél ilāni ilu Marduk*, 'lord of the gods, the god *Marduk*' (col. 4, l. 8; col. 7, l. 24), and *bél shigilli ilāni*, 'the lord, the leader of the gods' (col. 9, l. 47). Many gods are mentioned in the text, but *Marduk* towers above them all. He is the *ilu*, 'the deity' *par excellence*. We shall return to this subject later.

Rawlinson's next two references to the "Records" are from a translation by Oppert. The signs here read *El* are an *én kit* (cf. original I. R. 70, col. 3, l. 9; col. 4, l. 2). The *an* or *ilu* is the determinative for 'god,' and *én kit* is the very frequent combination for the god *Bél* (o. g. I. V. R. 61, 30-1 b; Dour-Sarkayan, p. 24, l. 2, compared with p. 26, l. 2). Oppert has himself elsewhere in the "Records" (xi. 20: the original is I. R. 36.58) correctly translated an *én kit* by *Bél*; while in still another place ("Records," xi. 24) he has combined his two readings and given us a third, *Bél-El*. Here he evidently means only to say that he regards *Bél* and *El* as convertible terms, or rather that *Bél* is *El*. But Rawlinson misunderstood him, and hence he tells us that in two of the passages the name *El* "seems to stand for *Bél*, who is called *Bél-El* sometimes" (p. 37, note). Let the future writer on the "Science of religion" beware of such "data" as these!

The "Records" (v. 118) have another mention of the god *El*, but the translation is hopelessly incorrect. The original (I. R. 54, col. 2, l. 60), an an shu par (?) an ki, could never mean 'the statue of the god *El*, the beauty of the sphere.' It is to be read *ilāni shu-par* (?) *shamé iršiti*, 'the gods in the presence (?) of heaven and earth.' The same expression occurs elsewhere (V. R. i. 86), except that the plural *ilāni* is expressed, not by doubling the sign an an, but in the more usual way, an mesh.

Equally unfortunate is the argument for the existence of a god *Il* (*El*) or *Ra* drawn from the Accadian name of the city Babylon, which Rawlinson informs us (p. 38) was *Ka-ra*. On the contrary, this name was *Ka-dingir*, generally written *Ka an ra*, where *ra* is what is known as a "phonetic complement," indicating that the preceding sign an is an ideogram for a word ending in the letter *r* (*ka* = Assyrian *bābu*, 'gate,' Arabic *bābu*: cf. Delitzsch, *Lesestücke*, p. 52, l. 233; and for *dingir* = Assyrian *ilu*, 'god,' cf. ib. p. 46, l. 2). The name *Rab-ilu* is then a literal translation into Assyrian from the Accadian *Ka-dingir*, 'gate of god.' As *dingir* was the generic term for 'deity' among the Accadians, so was *ilu* among the Babylonians and Assyrians. Far from meaning 'the gate of *Il*,' it more probably means simply 'gate of deity,' without reference to a special god or even to a single god. This seems to be also Schrader's present opinion (K. A. T., pp. 127, 128). The word *ilu* often occurs where there is no thought of a particular god: e. g. I. R. 36.64, where Sargon appoints for his new capital, *Dūr-Sharrukēn*, persons who shall teach the inhabitants *palak ili u shurri*, 'the fear of god and of king,' i. e. 'of the gods and of the kings.' Elsewhere there is mention of the food or the clothing 'of god and of king' (cf. Judg. ix. 13).

Prof. Rawlinson says (p. 38) that the god *Il* "was certainly regarded as the head of the pantheon;" and yet, perhaps because he was "a somewhat shadowy being," the Babylonians "frequently omit him from lists which seem to contain all the other gods." He cites as a case of such omission an inscription of the very ancient king *Agu-kak-rimē* ("Records," vii. 3 ff.). But the original (V. R. 33, col. 7, l. 36) has in the list cited the very ideograms (an *én kit*) on which Oppert's and Rawlinson's *Bél-El* is based. The same ideogram occurs also in the 5th line of this inscription; but as it is in both cases correctly translated '*Bél*' in the "Records," Rawlinson is thus prevented from recognizing his imaginary *Bél-El*. This list ("Records," vii. 7, 8) is by no means intended to give the names of all the principal gods. It omits *Ishkar*, the greatest of the goddesses. But that *Ishkar* was one of the chief deities of *Agu-kak-rimē's* pantheon is seen by the fact that she is mentioned in the opening of the inscription (l. 9) along with the great gods *Anu, Bél, Ea, Marduk, Sin*, and *Shamash*.

We pass now to the examination of some other passages in the cuneiform inscriptions. One of these is an *én kit an an an sur ut* (I. R. 63, col. 7, l. 24; V. R. 34.48 a), and has been generally understood until recently to contain the names of three gods, *Bél, El*, and *Marduk*. As we have above seen, an *én kit* are indeed the signs which very often represent the god *Bél*; an *sur ut* are the signs for the god

Marduk. It was therefore very natural to see in *an an* another deity, i. e. the god *Il*. This interpretation commits, however, a double mistake; *an én kit* is not here, as it often is, the god *Bél*, is indeed not a proper name at all, but means *bél* 'lord,' while *an an* is to be read *iláni*, 'the gods.' We should then have in transliteration *bél iláni Marduk*, 'the lord of the gods, *Marduk*,' in which *Marduk* and the 'lord of the gods' are synonymous expressions. The reading *bél iláni Marduk*, 'the lord of gods, *Marduk*,' recommends itself by its bare announcement, is perfectly consonant with what we know to have been the high regard of the Babylonians for this deity, and is raised above all doubt by line 44 in a Nebuchadnezzar inscription recently acquired by the library of Harvard University. This line has the signs *an sur ut an én kit ni ni*, which are to be read *Marduk bél iláni*, i. e. '*Marduk*, the lord of gods.' Here *Marduk* precedes the appositive title *bél iláni*, and *ni ni* has taken the place of *an an*. But *ni ni* is a well-known way of writing *iláni*: cf. for instance II. R. 55.1 b, where the writing *bé-lit ni-ni* stands for the goddess whose name is often written *bé-lit an mēsh*: i. e. *bélit iláni* (I. R. 36.60); or cf. V. R. 34.52 b, where for *ni ni* another copy reads *an an*, i. e. *iláni*, 'the gods.' Compare further the expression *iláni* (written *ni ni*) *bānā'a*, 'the gods, my creators' (IV. R. 17.24 b).

It is also not without analogy when *an én kit*, the special combination of signs for the god *Bél*, is employed instead of the usual simple *én* as a common name for *bél*, 'lord.' The same secondary application of a sign is seen in the large character pronounced *ù* and used as a connective of words. This *ù* is, so far as I have observed, never employed in the older literature as a syllable, but is always an independent word meaning 'and,' or it is occasionally an ideogram (as in *Mulla-bara* above). But in some of the texts of Nebuchadnezzar *ù* is used both as a connective and as a syllable, specially in the word *ra-bi-ù* 'great:' e. g. *Marduk bél ra-bi-ù*, '*Marduk*, the great lord' (V. R. 34.11 a); *bél ra-bi-ù Marduk*, 'the great lord, *Marduk*' (V. R. 34.55 b; cf. also I. R. 51, col. 1, 10).

Another passage supposed—by Schrader, for instance (K. A. T.², 11)—to be positive proof of the existence of a god *Il*, is on a lexicographical tablet containing a list of gods (II. R. 48.24 ff.). Part of this bilingual tablet contains on the left certain signs and on the right the names of certain deities, written ideographically or phonetically, represented by those signs. First comes *ilu*, then *ish-tar*. These are followed by *Anu*, *Bél*, and *Ea*, the members of the first triad in the Pantheon. Then come *Sin*, *Shamash*, *Raman*, constituting the second well-known triad. After these are *Marduk* and his spouse, *Zirpanitu*; *Nabu* and his spouse, *Tushmētu*.

Now it is claimed that this list gives the names of the Babylonian gods with their relative rank, and that *ilu* at the head of the list is the supreme god, i. e. the god *Il* or *El*. *Ish-tar*, the second name, is also understood to be the well-known goddess *Ishtar*. Of course, then, she must be the second in rank, next to *El*, and higher than *Anu*, *Bél*, and *Ea*.

The date of this tablet is not known, though it is perhaps very old. The mention of a Sargon, who is probably the Sargon of Agane, would indicate that the text was not earlier than the time of this king. Now we have texts belonging to still earlier times, for instance a text of the old king *Agu-kak-rimé* (V. R. 33); but this text, though mentioning many of the gods, has no *Il*; and it names the goddess *Ishtar* after *Anu*, *Bél*, *Ea*, and other gods. In general, leaving the list under discussion out of the question, I know of no evidence that *Ishtar* was ever regarded as of equal rank with the gods *Anu*, *Bél*, and *Ea*. In the Assyrian method of representing the gods by numbers, 60 stands for *Anu*, 30 for *Sin*, the moon-god; while *Ishtar* has only 15 (Lotz, *Quest. de hist.-Sabb.*). The presumption therefore is that in the list before us either *ishtar* is not the goddess of that name, or if it is, the list is not altogether arranged according to the relative rank of the gods.

The most probable solution of the difficulty lies in considering both *ilu* and *ish-tar* in the list as representing, not two deities, but generically 'god' and 'goddess' (so Tiele, *Hist. Comp.*, p. 182), just as they in their turn are preceded by two signs for 'heaven' and 'earth.' The use of the word *ish-tar* (written *an ish-tar*) to express, not the name of a deity, but 'goddess' in general, would be parallel to what we have above seen in regard to the name *Bél*. And there is other proof that *ish-tar* was so used, being indeed occasionally accompanied by pronominal suffixes. See the expression *lib-bi ili-shu ù ilu ishtar-shu*, 'the heart of his god and

his goddess' (IV. R. 8.10 a), and *ul i-ri-man-ni ilu ish-ta-ri*, 'My goddess has not loved me' (IV. R. 67.58 b). The word occurs even in the plural, like the Hebrew *אֱלֹהִים*. One of Sargon's inscriptions mentions *ikini ù ilu ish-tar-at áshibulê Ashur*, 'the gods and goddesses inhabiting Assyria' (Khors. 176; cf. II. R. 66.2). That *ilu* is often used for 'god' in general is a well-known fact, and some examples of such use have already been quoted.

Still another argument for the existence of a god *El* is drawn from a passage in an inscription of the old Babylonian king *Hammurabi* or *Hammuragash* (Ménant, *Manuel de la lang. assyr.*, 2d ed). This text begins thus: 'I am Hammuragash, the mighty king, the king of Babylon, the king . . . of the four regions of the world, who fulfils the will of *Marduk*, the ruler who rejoices his (i. e. *Marduk's*) heart.' It then proceeds: 'When *ilu* (an) ù *én kit* gave the people of Sumer and Akkad into my dominion and filled my hand . . . I digged the canal of Hammuragash, a blessing for the people, the bearer (*babilat*) of abundant waters to the inhabitants of Sumer and Akkad.' The discussion here concerns the signs *ilu* (an) ù *an én kit*, which have been read *Ilu ù Bél*, 'the god *Il* and the god *Bél*.'

Beside this reading, there are sundry other possibilities. 1. A mistake in the text. For ù perhaps there should be *sur-ut*, the similar and well-known signs for the god *Marduk*. The passage would then read *Marduk bél*, 'Marduk, the lord' (an *én kit*, as above, representing in that case not the god *Bél* but the common noun *bél*, 'lord').

2. But let us suppose the text correct. Then we may read *ilu ù Bél*, '*ilu* and *Bél*,' and understand *ilu* as 'the god, the deity.' The question then becomes, which deity? In this inscription the god preëminent is *Marduk*, so that the passage, while reading 'the god and *Bél*,' would mean '*Marduk* and *Bél*.' This agrees well with other parts of the inscription. It is with the forces which *Marduk* gives him that Hammuragash builds his castle. Omitting the passage under examination, no other deity is mentioned by name except *Marduk*, and his name is mentioned twice. *Marduk* is then clearly the chief god of this text. In another short inscription of Hammuragash, *Marduk* is beyond all question the great god in this king's pantheon. He is called by such titles as 'the great lord' (*bél rabû*), 'the giver of abundance' (*nadin hégalî*), 'the lord of Hammuragash,' 'the lord of Eshaggil and Ezida' (two famed temples). Hammuragash names himself 'the beloved shepherd of *Marduk*;' and he built at Borsippa a temple to '*Marduk* his creator' (*ana Marduk îli bânishu*). Prof. Tiele (*Hist. Comp.* 182) offers the same solution, but supposes that *ilu* stands for the god *Anu*, which seems to me less probable.

One might go a step further, and maintain that, so far as our information extends, *Marduk* is from the earliest times of the national history the chief Babylonian deity in point of rank, and that therefore there was no place for a supreme god *El* or *Il*.

Another paragraph should discuss the use of the word *ilu* in proper names. It is well known that both Babylonians and Assyrians were very fond of compounding proper names of several elements, one of which should be the name of a deity. The result of an examination of proper names containing *ilu* would be to show that this word does not represent a particular deity, but simply 'god,' as we saw above in the case of *Bab-ilu*, 'Babylon.' This is not saying that *ilu* would mean the same god in each case. *Zikar-ilu*, for instance, 'Servant of *ilu*,' might mean servant of *Ashûr*, servant of *Marduk*, servant of *Bél*, according to the preferences of the family in conferring the name.

On general grounds also it might be argued that there was no superior god *Il* in the Babylonian pantheon. It is on all sides admitted that he must have been a very vague, indefinite being, whose functions no one can define. The system was complete without him. *Anu* was god of the heavens, *Bél* of the earth, *Ea* of the deep. The planets also had their special deities. In Assyria, *Ashûr* was the national god, excelling in power all others. In Babylon this dignity belonged to *Marduk*. If a supreme god *Il* existed, he ought to have taken some part in the conduct of affairs, either of gods or of men; this he seems never to have done.

Further, in the Babylonian account of Creation and the Deluge, many gods appear, but a god *Il* never. Likewise in the accounts of the Babylonian gods which have been left us in Greek by Berosus and Damascius, *Il* has no place.

And, in general, in the older Babylonian system (for it is supposed that the idea of the supremacy of *Il* became obscured in later times), we may the less expect to find a god to whom the other members of the pantheon are subject. This would be an approach to monotheism which the Babylonians down to the fall of their empire never made. Before the consolidation of the empire, it seems that each city or province regarded its own deity as the most powerful of all; and after such consolidation the national god became the most powerful, but still the other deities did not become his subjects. They were indeed in the estimation of the people inferior to the national god, but independent of him, each in his own sphere supreme. It is in national affairs that the supremacy of the national deity appears.

For the general conclusion we might draw support of a negative kind from other Semitic sources. The word *El* represents neither in Hebrew nor Phœnician the name of a supreme deity (the Arabic does not have the word), but is, as among the Babylonians, the general term for 'deity.' The Phœnicians seem not to have advanced beyond this point. The Hebrews went further. When they rose to the full consciousness of monotheism, they made use of the general term for deity, *El*, *Elohim*, in speaking of the only God. They still retained indeed the name *Yahwe* along with *Elohim*, but it was because their national deity *Yahwe*, whom they had once regarded as one among other deities, had risen to be in meaning co-extensive with *Elohim*. *Yahwe* has burst through national boundaries and become the *Il*, the 'god,' of the whole world, not superior to other gods, but the only God, holding to all others the relation of existence to non-existence. This is the doctrine which comes out with such force in the second Isaiah (xlv. 5, 6, 14, 18, 21, 22; xlv. 9).

It is not impossible that other passages from the cuneiform inscriptions might be adduced in proof of the existence of a Babylonian god *El*, but those regarded as strongest by the advocates of this theory have been examined, and there is no reasonable doubt that any others might be easily explained in agreement with the conclusion of the foregoing discussion.

9. On the Bronze Crab Inscription of the New York Obelisk, by Prof. Isaac H. Hall, of Philadelphia, Pa.; presented by the Corresponding Secretary.

Those who were present at the New York meeting of the Society, just before the obelisk was set up in the Central Park, will remember that at the close of Prof. G. Seyffarth's communication about the obelisk, I asked if he had seen the bronze crab, and could give a correct reading of the inscription upon it; as I had noticed that the published copies differed from each other, and it was important to get at the true reading.

I may add that at about the same time, both before and after that meeting, I had written to several gentlemen who I thought possessed sufficient interest to have the matter looked into; but I did not succeed in awakening their attention.

On the 20th April last, I had my first opportunity to examine at leisure the crab and its inscriptions, the Metropolitan Museum of Art in New York (where the crab now is) being closed, and the stand with the crab being wheeled out so that I could view it in any light I wished. I made careful copies and notes: and also brought away tin-foil impressions, and a double set of plaster casts of both inscriptions.

It turns out that *all* the published copies are wrong. The Greek, on the outer side of the thick part of the claw, is as follows:

Λ ΙΗ ΚΑΙΣΑΡΨ
ΒΑΡΒΑΡΟΣΑΝΘΗΚΕ
ΑΡΧΙΤΕΚΤΟΝΟΥΝΤΟΣ
ΠΟΝΤΙΟΥ

That is:

'In the year 18 of Caesar
Barbarus set [it] up,
The architect being
Pontius.'

The inscription as published in W. R. Cooper's "A Short History of the Egyptian Obelisk," (London, Bagster, *n. d.*, first dedication and preface to 2d edition dated 1877), p. 48. is wrong in substituting an E for the L, and in omitting the I of the date. Cooper's authority was two-fold: "Dixon's letter in [London] 'Daily News,' July 18, 1877; and illustration in [London] 'Graphic,' July 7, 1877." Cooper also remarks: "The Latin text unfortunately differs in both." I believe that these two sources copied from a publication at Athens, or others in Alexandria, which I have not seen.

The L is the frequent inscription form of *lambda*, and stands for the old word for 'year,' whose nominative case is *λυκάβας*. To consider it as an E, for *eret*, was an easy mistake. As to the omission of the I in the date, that was honest; as it is only a few weeks since the bronze was properly cleaned; and before this operation the I was wholly undiscernible. But it is now quite plain, and cut as deeply as any other letter.

In the first line the last two letters are indistinct; the O being smaller, and near the top of the line; and the E being barely legible.

In Lieut.-Commander H. H. Goringe's "Egyptian Obelisks," Plate V., facing p. 6, also p. 55 and p. 76, the inscription is given without the mistake in the L (though a period placed after it seems to me doubtful); but, for the reason mentioned above, the I of the date is omitted. Also, the one word of the third line is wrongly separated into two: APXITEKTON OYNTOS, doubtless by an error of interpretation.

The Latin inscription, on the inner side of the claw, is difficult, and could never have been made out without the help of the Greek. It is not so well or so skillfully cut, it is much more damaged by time, and there are other reasons, presently to be mentioned, for trouble and confusion. The inscription as given by Cooper (*ubi supra*) and by Goringe (*ubi supra*), omitting the punctuation (which may be only the printer's work, and which is not to be seen on the bronze), is as follows:

ANNO VIII
AVGVSTI CAESARIS
BARBARVS PRAEF
AEGYPTI POSVIT
ARCHITECTANTE PONTIO

This is wrong in several respects. The inscription contains only four lines; the CAESARIS is on the first line; *there is no trace whatever of the word AVGVSTI*; and the date was clearly XVIII, and not VIII simply. But it is obscure, and has to be restored from the fragmentary strokes of the letters. The word ANNO is also very obscure, and has to be likewise restored. But I will first restore the inscription as it was on the bronze, and then make what remarks I intend at present. The inscription was as follows:

ANNO XVIII CAESARIS
BARBARVS PRAEF
AEGYPTI POSVIT
ARCHITECTANTE PONTIO

That is:

'In the year 18 of Caesar,
Barbarus Praefect
Of Egypt set [it] up,
Pontius being architect.'

(For "architect," in both inscriptions, I might have chosen a more technical English word; but it is as well to have it thus.)

It is plain, almost at the first glance, that a former inscription underlay the present one (a fact first discovered by Dr. W. C. Prime and Gen. di Cesnola); but I think it was only a mistake in cutting the inscription, and that it was made and corrected by the same engraver that made the present one. The marks of hammer and other tools, and perhaps of fire to soften, are quite plain in the former obliteration. The first line seems to have been made correctly; but I think that in making the second line the word CAESARIS was repeated, and the fault continued farther on in the line—at least. Before the B are traces of a CAE, apparently, and the lower curve in the same B is mostly part of a still legible S. The first R

in BARBARVS is illegible; and the second R overlies an E or an F. But I will not go into further particulars of that sort. As an evidence of the character of the engraver's knowledge, I will state that the P in AEGYPTI is made like a Greek Π, with the right leg short, as often seen in inscriptions, manuscripts, and early printed books. The T's in the last line extend high above the line, as represented in Cooper's copy; but the two last are formed on the last stroke of the N preceding. The F at the end of the second line (it is now impossible to say whether it was followed by VS) likewise extends high above its line.

Without the aid of the Greek, only CAESARIS could be read on the first line; BARBARVS could never have been made out; and the P in PRAEF likewise would have remained undecipherable. Also, in the next line, the I in AEGYPTI has a mistaken (or older) stroke which makes it a good D if one chooses so to read it. In short, it is impossible to account for the former published reading of the Latin inscription.

The matter of a supposed former inscription I forbear to go into further, as it would require more time than I now have at command. I have not noted all the peculiarities of the marks of such inscription; nor of the letters of either the Greek or the Latin inscription. Matters historical, also, I leave untouched, as I learn that Prof. Merriam of Columbia College has given the subject thorough study, and is preparing an article for publication which will render needless any further discussion on my part. I have only wished to give my independent testimony to the facts I have personally observed.

10. On certain Sounds in the Peking Pronunciation of Chinese, by Mr. B. S. Lyman, of Northampton, Mass.

Mr. Lyman gave his views upon a few points in Chinese pronunciation which are wont to be made unnecessarily troublesome and deterrent to a beginner in the language. He had practised them through a year at Yedo under an intelligent native of Peking, and afterward verified his conclusions with a well-educated Peking teacher at Shanghai.

The sound sometimes represented by *sz* is not made up of a surd and sonant sibilant followed by a breathing, but is simply a surd *s* followed by the vowel-sound of our *e* in *mercy* (our long "neutral vowel" before *r*). The same vowel-sound occurs after many other consonants, and has been very variously represented: most appropriately, perhaps (by Williams), with the German *ö*.

The sounds *sh* and *ch* followed only by that vowel are pronounced with the tongue rolled up, as for an English *r*.

The initial sound of the word for 'man' (*jén*) is written by some with *j*, by others with *zh*; it is really a *y* made with the tongue rolled up as above.

The sound sometimes represented by *érh*, sometimes by *'rh*, contains the same vowel-sound, of *e* in *mercy*, with our *r* in *arm*—an *r* made rather far back in the mouth.

Wade distinguishes by *'h* before *a*, *é*, *o*, *u*, and *hs* before *i* and *ü*, what Williams writes with simple *h*. The latter is preferable, since the following vowel always determines the quality of the sound: in the former case, the German *ch* of *ach*; in the latter, that of *ich*, only made still further forward in the mouth, close behind the teeth. It is the same with the Yedo *h*, often mistaken by provincial Japanese and foreigners for the Japanese *sh*; it is the sound which gave Golownin such great difficulty. The English *h*-sound is heard in Peking Chinese only after *ch*, *k*, *p*, *t*, and *ts*, where its position sufficiently separates it from the other sounds written with *h*.

W is a short English *oo*, and *un* has really no consonant element. In like manner, *y* is a short English *ee*, and *yi* is sounded exactly like *i*.

It has been sometimes held that Chinese words should not be called monosyllabic when they contain three separate vowel sounds; but these are short, and run together into a diphthong or triphthong, and there can be no valid objection to our viewing them as forming together one syllable.

Besides such combined short vowels, Peking Chinese has what some would call single long vowels: which, however, seem rather to be similarly coalescing repeated short vowels, the first pronounced on one pitch and the second on another, making an upward or downward slide, such as is made in successive

different vowels. An unpeated single short vowel is followed by *n* or *ng*, which enables the slide to be made audible. These slides, on two different keys, a higher and a lower, are the "tones," a much exaggerated bugbear to those who are to begin the study of the language.

11. Translation of two brief Buddhist Sūtras from the Tibetan, by Mr. W. W. Rockhill, now of Montreux, Switzerland; presented by the Corresponding Secretary.

The two Sūtras, of which I offer a translation from the Tibetan in the following pages, serve to show, in a certain measure, that Buddhist literature is in reality a comparatively meager one, if we take into consideration the immense collection devoted to it extant at the present time.

I might have taken a hundred other Sūtras in the Tibetan *Bkah-hgyur* that would have equally well served my purpose; but these are especially commendable, because they are short. It must have struck every one who has read any number of Buddhist works how the same stereotyped phrases, the same similes, occur on every page, and that one Sūtra differs from another only by slight changes introduced into these stock phrases, and by a selection suited to the text of the sermon. Take the *Dhammapada*, the *Sutta Nipāta*, or the Tibetan *Udānavarga*, and you will find the substance of nearly every Sūtra in the canon; these works have probably been used as compendiums from which the long diffuse Sūtras like the *Lalitā Vistara*, or the *Prajñā Pāramitā*, have been derived; but turn to whichever work one will, one finds the same sentiments, the same old precepts, of the *Dhammapada* and other like works.

I do not claim that these works are in themselves among the oldest of Buddhist literature; on the contrary, they cannot have been composed until after the Dharma had been taught for a long while; but they certainly contain the best authenticated versions of the sayings of the Buddha Gautama.

The founder of Buddhism addressed himself to the masses of the people, to the learned and to the ignorant; and to all he taught, not an elaborate system, but a few irrefutable truths; in some cases, even, he enables a hopelessly stupid person to perceive the truth by the simple performance of some manual labor, or by the constant repetition of one word; but generally he teaches them to repeat a few lines which contain that portion of the doctrine best suited to their intelligence. Frequently the triviality of the simile struck their untutored minds, and in every case the verses were so short that it required but little application to commit them to memory.

"He who, though he can only recite a few lines (of the law), walks in the way of the law, and has forsaken passion, anger, and ignorance, he has a share in the priesthood" (*Udānavarga*, iv. 23; *Dhammapada*, 20).

It is these oft-repeated aphorisms that have served as the basis of the greater part of the Sūtras, which were set down in writing long after the death of the Buddha; and it is unquestionably a proof of the estimation in which they were held, to find them everywhere repeated, or so slightly altered that we cannot help detecting the source from which they are taken.

For these reasons, I think that wherever we see these aphorisms, we may take them as the utterances of the Buddha, with much greater probability than any other part of the works we may have before us. The two following Sūtras are therefore worth notice, for they are undoubtedly compilations. It is remarkable that, beside Sūtras like these, in which moral virtues are so highly exalted, we find passages like the following, taken from the *Brahmajāla* Sūtra: "Bhikshus, all those foolish beings who have not heard (the law), speaking in praise of the Tathāgata, only speak of trifles, such as morality (*śīla*), and of the removing of desires by seclusion" (*Bkah-hgyur*, *Mo* xxx. f. 110 b).

The explanation of this discrepancy seems to lie in the fact that morality, charity, good will, etc., were the foundation—indispensable, it is true—the preliminary steps, of him who would reach perfect enlightenment, who would become a Buddha. The omniscience of which the Buddha was possessed made the more humble virtues sink into insignificance—in the case mentioned in the *Brahmajāla*, at least.

Morality—that is to say, keeping the ten or the six commandments binding on

a mendicant or on a lay follower—was a virtue essential to all beings, and was a source of great future felicity; but this only required to be impressed upon the ignorant crowd; and to such were these sermons or “trifles” spoken.

I have endeavored to preserve, as much as possible, the style of the *gāthās* forming the latter part of the *Mūṭribhāvana Sūtra*, which appears to me to have been something like a song.

This Sūtra gains especial interest from the fact that it is one of a rather numerous class of Sūtras which were translated into Tibetan directly from Pāli, as we are informed by the colophon, which says that “it was translated in the Mahāvihāra, in the island of Ceylon, by the great pandit Anandaṇḍi and the *bahusrutya lotsava*, the bhikshu of Cākya, Ni-ma-rgyal-mtsan dpal-bzang-po (*Sāryadhvaja śrībhadrā*), who (both of them) understood the two languages (Pāli and Tibetan or Sanskrit).”

BHIKSHU PRAṆEJU SŪTRA.

In the language of India, *Bhikṣu prañeju sūtra*; in the language of Bod (Tibet), *Dge-slong-la rab-tu gches-pai mdo* (the sūtra called ‘very agreeable to a bhikṣu’).

Praise be to him who knows all!

I once heard the following discourse, while the Blessed One was residing in the Phullapadma *vihāra* in the great city of Cṛāvaṣṭī, accompanied by a retinue of twelve hundred and fifty bhikṣus.

Then it happened that from amidst the retinue of the Blessed One, the *ariya* called Upālī, whose senses were well controlled, who was attentive, whose wisdom was profound, who was particularly esteemed on account of the way in which he could recite the disciplinary rules that had been set forth by the Blessed One, rising up from his mat, throwing his cloak over one shoulder, touched the ground with his right knee with hands joined over his breast, and smilingly said to Bhagavat: “Thou who, like a lotus, art free from the mire of the world, thou who art unshaken as a mountain, whose mighty body is adorned with the ornaments of symmetry and beautified with the flowers of signs, thou whom one gazes at unwearingly, who art the best of the best, thee do I worship!

We who are here gathered together, all of us bhikṣus, we beseech the Mighty One to tell us these four things: 1. the nature of a bhikṣu; 2. the different kinds (of bhikṣu); 3. what constitutes (this condition); 4. the deportment (of a bhikṣu).”

Then the Conqueror, the Blessed One, well pleased, turned toward Upālī and said: “Give thou only ear, Upālī, and I will satisfy you by explaining what is becoming in bhikṣus.

The real bhikṣu, being the chief ornament of the Law, the real bhikṣu is a living diamond.

The real bhikṣu, having cast off suffering, the real bhikṣu is the son of the Conqueror.

The real bhikṣu, having destroyed all corruption, the real bhikṣu goes to the garden of freedom.

The bhikṣu controlling (or who controls) his whole nature, knowing the four fundamental (truths), and observing the two hundred and fifty (rules of the *Prātimokṣa* *), is pure and virtuous.

There are many kinds of bhikṣus: the signs and characteristics of the real bhikṣu, of him to whom that name only really applies, are these:

He who seeks for virtue (*dge-slong* = bhikṣu), and who seeks for his food by begging, who is dispassionate, who walks in the way, whose life is correct, who has cast off passions, he, on account of these qualities, is a bhikṣu.

The real bhikṣu is adorned, for having cast away (worldly) ornaments, he is well adorned. He has attained his great desire when he has cast off desires.

The mendicant who cares about unguents, baths, choice food, jewels, (fine) garments, collyrs, horses, elephants, palanquins, wagons and carriages, for which he ought not to care, is not a (real) bhikṣu.”

Then Upālī said to the Blessed One: “What the Sugata has said is obscure; I beseech the Sugata to illuminate with the light of his words the obscurity of his (previous) sayings.”

* There are 253 rules in the *Bhikṣu Prātimokṣa* and 373 in the *Bhikṣuṃ P.* in the Tibetan version. The Chinese *Prātimokṣa* has 250 rules.

Then the Blessed One said:

"He who has cast far away gold and all the other ornaments of the world, and who is merciful, he is adorned with the most precious of ornaments.

Not the garments of the world, but the garment of the doctrine, the saffron-colored gown, is the best of raiment.

It is not camphor and such like, but morality, that is the best of unguents.

It is not white, red, or such like, but faith, that is the most beautiful color.

It is not worldliness, but application, that is the best and swiftest conveyance.

Contemplation and the practice of the Law is the best food, and has a sweeter aroma than boiled rice.

They who in the abode of the community are dispassionate, who are content with a single mat, come not back again (to this world), they are truly bhikshus.

They who, weary of the three perfections* (*pradhāna*) and their accompaniment, become hermits, and (take up) cool dwelling places, their bodies, speech, and minds all well controlled, knowing the proper way to comport themselves, they are truly bhikshus.

Both of these (kinds of bhikshus) arrive at the city of freedom, where they enjoy the perfect happiness of freedom.†

He who scoffs at the alms-bowl and the other (possessions of a bhikshu), will be plunged in hell in molten bronze for four thousand *kalpas*.

To some morality (*śīla*) brings happiness, to others morality (i. e. the want of morality) is a source of suffering.

He who has morality has the greatest blessing. He who acts against morality is in misery.

He who has brought himself to perfectly observe morality, the appearance of that man is beautiful.

He has nearly conquered, I consider, the man who has learnt morality; for in a single day he acquires an incalculable amount of merit, which vies with the fruit of enlightenment (*bodhi*).

He who convinces himself that he understands the spirit of the Law (lit. the sign of victory) of the Sugata, when he is not keeping the precepts of the Law, that man is only devoted to form (*rūpa*);‡ that bhikshu I consider like a mad bull held by a hair, or like one who drinks acids rather than sweets. That man sows in a single day innumerable seeds of wickedness, and does himself all kinds of injuries.

He who keeps not the *śīla* precepts, who, though not keeping the precepts, (thinks) that he comprehends rightly the Law of the Sugata, who approves of the saying that one can hold on to form (*rūpa*) and to a home (life), that man, not keeping the precepts, perceives not the characteristics that mark all worldly (existence) as essentially connected with sorrow; so all the utterances of that man are evil.

The live trunk of a tree can send forth shoots for a long time; so that man will talk for a long time the language of sin, and will greatly add to his wicked works.§

Morality is the greatest happiness! Morality is the road to freedom! Morality is the field of perfection! Morality is the foundation of enlightenment! Morality is the chief of good things! Watch over morality as over the apple of your eye, for life is at stake! He who renounces it, unwise, foolish is he!

All things that are born have but a limited existence; but morality has no such future.¶

Therefore, Upāli and all you other disciples, watch well over these laws."

When the Blessed One had thus spoken, Upāli and the bhikshus greatly extolled his teaching.

The sūtra called *Bhikshu prareṇu* is finished.¶¶

* *Giso-bo gsum*: this most likely means Buddha, Dharma, Saṅgha, but in a very restricted sense.

† They attain arhatship or *kleśanirvāṇa*.

‡ "If one has heard little, but does carefully observe the moral laws, he, because he honors the moral laws, is the best kind of hearer." *Udānavarga*, xxii.8.

§ Cf. *Dhammapada*, v. 338.

¶ Or it may be rendered: "He who is born has a limited life, but he who observes the *śīla* precepts has no such future."

¶¶ Taken from the *Bkaḥ-gyur*, xxvith vol. of the *Mdo*, f. 189, 192.

MĀITRĪBHĀVANA SŪTRA.

In the language of India, *Māitribhāvana sūtra*; in the language of Bod, *Byams-pa bsgom-pai mdo* ('the sūtra on showing good will').

Glory to the blessed Triratna!

This discourse I once heard, while the Blessed One was stopping at Ārāvastī, at Jitāvana, in the grove of Anathapindika. It happened that the Blessed One called the Bhikshus to him; and when they were in the presence of the lord Bhagavat, he spoke to them as follows:

"To thoroughly emancipate the mind, one must show good will; to steadfastly keep it in one's thought, one must show it to many; one must be dispassionate, one must make it a fundamental law, one must strictly adhere to it; to this accustom yourselves, devote yourselves.

There are eleven blessings (attached to good will) which I will explain. They are as follows: one sleeps peacefully, one awakes peacefully, one has no bad dreams, men delight in him, supernatural beings delight in him, the gods protect him, fire or poison or the sword harm him not, his mind is always happy, his countenance is beaming, he will die with his mind at peace, through his righteous deeds he will be born in the world of Brahmā.

Bhikshus, steadfastly keep the thought of good will in your minds, practice it, show it to many, be dispassionate, make it your fundamental law, strictly adhere to it, to this accustom yourselves, devote yourselves. These then are the eleven blessings.

Bhikshus, I will tell you of yet other blessings that good will brings:

He lives with food and drink in plenty, Which he finds near at hand,
He lives in the midst of great abundance, The man who is not without good will.

Where'er he goes within the town, Be it in the city or in the royal palace,

Everywhere he meets with honor, The man who is not without good will.

To him thieves and robbers come not, To him the king does no harm,

He is a friend to all creation, The man who is not without good will.

Free from anger, he happily lives at home; To mankind there shines no such
pleasing vane,

But he is better than them all, The man who is not without good will.

He who shows honor, honor he will find, He who bows, to him shall others bow,

Glory and fame shall he find, The man who is not without good will.

He who is respectful, respect he shall find, Reverence comes to him who shows it,

He will have the bloom of health, The man who is not without good will.

He shines as does a blazing fire, His body like that of some (bright) god;

He will not lose his wealth, The man who is not without good will.

Great will be the herds, Great the grain in the field,

Many the sons and the daughters, Of the man who is not without good will.

Falls he from off the mountain-top, Or falls he from off a tree,

He drops not, but (gently) reaches the earth, The man who is not without good
will.

The man who climbs a *phata* (? or *tala*) tree, Cannot be shaken by the wind,

So enemies cannot bring to harm The man who is not without good will."

When the Blessed One had thus spoken, the Bhikshus greatly extolled his teaching.

The sūtra on showing good will is finished. (*Bksh-hgyur, Mdo xxx. f. 575, 576.*)

After the completion of this paper, the Society, with the usual vote of thanks to the American Academy for the use of its room, adjourned, to meet again in New Haven in October.

Proceedings at New Haven, Oct. 24th and 25th, 1883.

Pursuant to adjournment, the Society met at the Library-room of the Yale Divinity School in New Haven, on Wednesday, October 24th, at 3 o'clock P. M., the President in the chair.

After the reading of the record of the previous meeting, the Committee of Arrangements reported that they had accepted on behalf of the Society an invitation from the Corresponding Secretary to assemble socially, with their ladies, at his house in the evening, meeting there other invited guests; and that the reading of papers would be adjourned from the end of the afternoon until Thursday morning at nine o'clock.

The Directors announced that they had appointed the next meeting to be held in Boston, in May next, and on Wednesday the 7th of that month, unless the Committee of Arrangements, Professors Toy and Abbot, should see reason for changing the day. They also stated that, at the suggestion of the Treasurer, they had voted to omit the yearly assessment for the current year.

The following persons, recommended by the Directors, were chosen Corporate Members:

Prof. Paul Haupt, of Baltimore, Md. ;
Mr. F. Cope Whitehouse, of New York City.

The correspondence of the past half-year was reported on, and extracts from it were read:

Miss Amelia B. Edwards writes from Bristol, Eng., Aug. 17th, 1883, explaining that she is not (as called in the Proceedings of the last meeting) Mr. Poole's assistant, but honorary secretary along with him to the Egypt Exploration Fund, which she had labored independently for many years to call into life.

Pres't Martin, of the Tung-wen College, writes from Peking, Sept. 4th, 1883, commenting on the state of affairs in China, and promising for the Society's next meeting a paper on the Northern Barbarians of Ancient China, with especial reference to the period preceding the erection of the Great Wall.

Rev. L. H. Mills writes from Hannover, Sept. 15th, 1883, accompanying a copy of the first volume of his work on the Zoroastrian Gâthâs, already more than once reported on by him to the Society and mentioned in its Proceedings. The volume is not yet published, but copies of it have been distributed to all the leading Zend scholars in Europe. The second volume, containing, besides the author's commentary, an autographed Pahlavi text, a paraphrased version, etc., Mr. Mills hopes to have ready in six months more. The volume already completed was exhibited to the meeting.

Mr. F. Cope Whitehouse writes from New York respecting his new determination of the site of Lake Mœris (along with copies of his papers on the subject in the *Revue Archéologique* and the Proceedings of the Society of Biblical Archæology, for June, 1882).

Mr. Whitehouse claims that the determination made by Linant de Bellefonds has only been used to cast discredit upon the authenticity of ancient records, and is wholly indefensible. It is now conceded that the dyke at El-Lahun prevents High Nile from filling not only the Fayoum, but also the Wadi Reian, which Mr. W. discovered and surveyed in 1882. See Schweinfurth in *l'Exploration* for May, 1883, and Amélineau in the *Revue des Questions Historiques* for Oct. 1883. The Mœris which it is now proposed to restore would be only the southern or Reian basin. It would resemble in form and situation the *Meridis lacus* on the maps of Ptolemy. It would hold water enough to irrigate 1000 sq. miles of territory, and free Egypt from the dread of a dangerous flood.

Communications were now called for, and were presented as follows:

1. On the Phœnician Inscriptions of the di Cesnola Collection in New York, by Prof. Isaac H. Hall, of Philadelphia, Pa.

Prof. Hall spoke especially of those inscriptions which come from the site of a temple on a tongue of land between the sea and the salines west of the Marina of Larnaca, the present Citium. There were two temples on this tongue of land, each on a little kuoll. One was a temple to Artemis Paralia, as shown by the Greek inscription there found. (In Cesnola's "Cyprus" the inscriptions and temple are wrongly credited to Demeter Paralia, but the mistake was long ago discovered.) The other temple, at the end of the tongue of land, is shown by all the Phœnician inscriptions found there to have been erected to the deity Eshmun-Melkarth, i. e. Æsculapius-Hercules. This deity Prof. Hall proposed to identify with Palemon, or Portumnus, or Portumnus, a patron of shipwrecked mariners; and he purposes to present a full paper on the subject at a future meeting.

2. A Temple of Zeus Labranios in Cyprus, by Prof. I. H. Hall.

In Cesnola's "Cyprus," at p. 283, is a short account of a visit and discoveries made near Fasuli, a village not far from Amathus, where thorough exploration was prevented by lack of tents and provisions, as well as by a fire apparently kindled by the natives to drive the explorers away.

"On the summit of one of [the hills west of Amathus]," runs the account, "very difficult of ascent, situated between the two small villages of Dimitri and Fasuli, I found the ruins of an elliptical structure measuring twenty-seven feet by sixteen. Its area was strewn with pieces of broken statues, upon two of which an eagle was carved. I discovered also, on the bases of two life-size statues, to which the feet still adhered, Greek characters roughly but deeply cut in the calcareous stone (see Appendix). I should have liked to explore this spot thoroughly, as these ruins are not improbably those of a temple dedicated to Jupiter." Then follows the reason for not exploring more thoroughly, stated above.

On looking at the "Appendix" for the above reference, it appears that the inscriptions here referred to are not given; the reason being that the stones were on their way to, or had reached, America, when that Appendix, covering the Greek inscriptions, was compiled in England. The inscriptions are now in the Metropolitan Museum of Art in New York City, and are rather difficult to read without being taken out of the cases. They had not been read or deciphered till I examined them last September.

Before proceeding to the inscriptions, however, I wish to supplement the account given in "Cyprus," from Gen. di Cesnola's note-book, written at the time on the spot, which he kindly showed me. The note-book contains a pencil-sketch of the hill, with the ruins at the top, and stone fragments, as they had rolled down the hill on one side, and lay at the base and partly along the slope. It contains also a plan of the structure, from which it appears that the ellipse is

truncated at one end, through the middle of which end was the entrance. Near the other end, inside, against either wall and opposite each other, are the pedestals (probably) of the two statues referred to. The note-book also contains sketches of the two bases which bear the inscriptions. The written entries in the note-book are as follows:

"Fasula (this is the general local pronunciation), 1½ hours' mule drive from Paleo-Limassol, west of Amathus.

[Here follows sketch of the hill.]

"With temple at top, and fragments lying along foot of hill and a little way up.

"Temple found about 4 ft. below ground, made of small irregular stones.

[Here follows the plan, with dimensions.]

"No remains below the foundation, and no entire statuary or statuette found here.

[Here follow the sketches of the bases with feet.]

"Found 16 fragments of statues Gr[æco-] R[oman], all life-size. Fragments of 2 statues, having the eagle (Jupiter?). Greek inscriptions. Only a few hours of digging. Some one fired the woods purposely, and we had to stop working here.

"These 16 fragments seem to belong to three statues only, of none of which the head was found. Most of the fragments were a few inches only buried, and others were found at the bottom of the hill, as if hurled down by peasants. My guide says he has seen the fragments where they lie when he was a boy. No houses near by. The little village of Fasula is the nearest point."

(I may mention that the statuette figured on p. 283 of "Cyprus" is mentioned in the note-book, and the place of its finding described. It was at a different place from this hill.)

I asked Gen. di Cesnola, for reasons which will appear further on, if he found any sculptured axe, but he says that he did not.

The bases with feet are of the calcareous stone of Cyprus, now made familiar by the sculptures in the Museum. The letters on each base are of about the same age, and belong, apparently, to a period limited by the third and fifth centuries A.D. They are deeply cut, in two lines to each inscription, nearly covering the whole front edge of the stone. The letters are about an inch high, rude, and presenting some peculiarities in shape. One of these inscriptions (numbered 132) reads as follows:

(1) ΟΛΙΑΣΑΣΣΕΣΙΑΒΡΑΝΙΩΕΥΣΕΑ

(2) ΜΕΝΟΣΑΠΕΔΩΚΕΝ

or,

Ὀλιάσας Δὲ Λαβρανίῳ εὐχόμενος ἀπέδωκεν. In English:

'Oliasas having vowed paid [it] to Zeus Labranios.'

In this inscription the *sigma* and the *epsilon* are of the form familiar in uncial manuscripts, or somewhat like the Roman C. The *omega* is like that *epsilon* turned so that the curved side is downward. The *mu* is sprawling, with the two inner strokes joined in a curve. The *kappa* is turned on its side, so that what is usually the vertical stroke is nearly horizontal, with the oblique strokes hanging below it. The *upsilon* extends below its line, quite across the face of the stone (the last *nun* of the second line being reached just before it), and so does the *xi*, which has a form much like that of the earlier uncial manuscripts.

The other inscription (numbered 105) is as follows:

(1) ΔΗΜΗΤΡΙΣΔΙΑΒΡΑΝΙΩΕΥΣΕΑΜΕ

(2) ΝΟΣΑΠΕΔΩΚΗ

or,

Δημήτρης Δὲ Λαβρανίῳ εὐχόμενος ἀπέδωκεν. In English:

'Demetris having vowed paid [it] to Zeus Labranios.'

In this inscription the letters are of the same general style as the other, except that the second *delta* in the first line stands on its apex, with its horizontal line at the top; the *xi* has the usual form; and the *upsilon* is shaped like a Roman V.

It lies upon the surface, after these inscriptions are once read, that General di Cesnola was right in his conjecture that the ruins are those of a temple to Jupiter. As he found the eagle, so we find the name, and read that these statues were votive offerings to the deity, by persons bearing the respective proper names given in the inscriptions. The third statue which the fragments disclose was probably the temple-ἄγαλμα, or ξόανον, of the divinity.

The identification of the particular Zeus, or Jupiter, whose temple this was, is

not much more difficult. To anticipate a little, he was the Zeus Stratios, or Jupiter of the camp and war, who had a temple at Labranda, in Caria, and who is known in the classic writers as Labrandeus, Labradeos, Labrandenus, Labrandius, Labraindios, Labrayndenus, and still other varieties of spelling. The only trouble in the identification—and that not serious, even if it were not removed—is to account for the absence of the *d* in the word as it occurs on the inscriptions, since the *d* is found in all the forms given by the Greek and Latin writers. But this trouble will disappear before we come to the end.

The first mention of this Carian or Lycian Zeus is in Herodotus, v. 119, where it is related that such of the Persians as escaped from the battle of the Marsyas collected together at Labranda, ἐς Διὸς Στρατίου ἱρὸν, μέγα τε καὶ ἅγιον ὄλεος πλατανίστων. Herodotus adds: "and the Carians are the only ones we know who offer sacrifices to Zeus Stratios." He also, a little further on, indicates that this ἱρὸν was not far from Mylasa.

Strabo (xiv. 23, or c. 659) gives a little more particular information about this deity and shrine: "And the Mylasians have two temples of Zeus, that of the one called Ὀσσοῦα and the one [called] Labrayndenos (Λαβρανδηνού), the one in the city, but Labraynda (τὰ δὲ Λάβρανδα) is a village in the mountain on the pass from Alabanda to Mylasa, away from the city. Here is an ancient temple to Zeus Stratios; and he is honored by the people of the region (τῶν κύκλῳ) and by the Mylasians; and a way, called sacred, is paved for about sixty stadia, as far as the city, through which the sacred processions are conducted. And the most distinguished of the citizens are always consecrated for life. These, then, are the peculiar matters of the city."

The site and title of Labranda were perfectly identified by Fellowes ("Lycia" pp. 67 ff.), in accordance with Strabo's description, even to the distance and the paved way. It is not to our purpose to quote Fellowes here, though we shall do so in another connection. We may remark, in passing, that some of the classical dictionaries wrongly credit Fellowes with the mistake of Leake ("Asia Minor," p. 234), who located Labranda at Iakli. The true site is to the northwest of *Melaso* or *Mellasa*, the modern representative of the ancient Mylasa.

Of the mention of Zeus Labrandenus in the Greek and Latin authors, it is not necessary to cite all the instances; but a few of them are proper for our purpose.

Pliny (*Hist. Nat.* xxxii. 2, 7), says: *E manu rescuntur pisces in Labrayndi Jovis fonte*. The same feeding of tame fishes at this place is also related by Ælian (*Hist. Animal.*, xii. 30): "And in the sacred place (τῷ ἱερῷ) of the Labrandean Zeus (τοῦ Λαβρανδέως Διός) is a spring of transparent water, and the fishes have necklaces and earrings, and all gold. And the temple of Zeus is sixty stadia from the city of the Mylasians. Upon this image is hung a sword (ξίφος); and it is honored, called both Karios (Carian) and Stratios; for the Carians were the first to make a market of war, and to go to war for money, and to hang straps (ὄχαρα) upon their shields, and to attach crests to their helmets. And their name was called [Carians] from Kar the son of Crete and Zeus. But Zeus Labrandeus (Λαβρανδεὺς—*eu* being diphthong, like the *av* of the preceding syllable in Strabo's word) is said to have received and to bear the name from having rained furiously (λάβρῳ) and much."

With this derivation of the name compare Lactantius (*De Falsa Religione*, i. 21). Speaking of the way in which heroes acquired power and compelled divine honors, he goes on: *Sic constituta sunt templa Jovi Atabyrio, Jovi Labradeo. Atabyrios enim et Labradeus hospites ejus, atque adiutores in bello fuerunt. Item Jovi Lapirio, Jovi Moliori, Jovi Cassio, et quæ eunt in eundem modum.* (The text here followed gives the name as *Labradeus*, but others give it as *Labrandeus*.)

As the Greek and Roman authors were confused about the spelling of the name, so these passages in Ælian and Lactantius show a confusion in respect to its derivation and meaning. But in the latter point Plutarch will set us right, especially as supplemented and confirmed by the investigations of Fellowes and by these two di Cesnola inscriptions. Plutarch's *Quæstiones Græcæ*, xlv., runs thus: "For what reason is the image of the Labradean (Λαβραδέως) Zeus in Caria furnished (ἡρμένον) with an axe (πέλεκυν), and not made with a sceptre or thunderbolt? Because Hercules, having slain Hippolyte and taken away, among other things, her axe, gave it as a present to Omphale; and the kings of the Lydians with Omphale bore it, receiving it in succession among the other sacred heir-

looms; until Candaules, having disdained it, gave it to one of his comrades to bear. But when Gyges revolted and made war against him, Arselis from the Mylians came as an ally to Gyges with a force and destroyed both Candaules and his comrade; and he brought the axe to Caria along with the other spoil. And having prepared an image of Zeus, he put the axe in its hand, and called the god Labradeus (Λαβράδα); for the Lydians call the axe *labrys* (Λίδοι γὰρ λάβρυν τὸν πέλεκυν ὀνομάζουσι)."

Now the axe, usually double-bladed, or double-headed, was found by Mr. Fellowes to be the prominent symbol of Mylasa and the shrine Labranda. In his "Lycia," p. 75, he gives a cut of this double axe, from the keystone to "a fine arched gateway" at Mylasa. "This emblem," he says, "I have seen on four different keystones, built into various walls in the town, showing that it must have been very commonly used in the architecture of the city, and not improbably placed over each of its gates." Also, "I have obtained coins of the ancient city, with the same emblem upon them, and also one representing Jupiter, with a similar axe in his hand." These objects he represents in plate 35, numbers 4 and 5, at the end of the volume. The coin has for its obverse a head, with the legend ΣΕΒ[ΑΣΤΟΣ] ΗΡΟΣ ΠΕΡΤΙΝΑΞ; and on the obverse an image of Jupiter, holding the double axe in one hand, and a spear in the other; with the legend ΜΥΤΑΣΣΕΩΝ. The shape of the Greek letters on this coin, as would be expected, corresponds with its age.

It is, of course, perfectly clear that this Zeus of the Axe, or of the *labrys*, was the Zeus Stratios of Labranda; and that the name Labranda, or Labraynda (probably originally Labryanda—τὰ Λαβρίανδα, and thence τὰ Λάβρανδα, *av* diphthong afterwards giving way to *a*) was derived from *λάβρυν*, or the Carian word represented by that Greek form. It is not clear just how all the ways of spelling the word arose (besides the above, Fellowes found a tombstone inscription with the word *Λαβρανδίδος*), but each is susceptible of a very natural explanation, which is probably also the historical one. We are prepared to find the *v* or *y* missing in the Cesnola inscriptions, as in other cases. Nor is it at all difficult to account for the absence of the letter *d* in the termination. The termination *-da*, or *-nda*, or *-avda*, is shown by its frequent occurrence to be a Carian, Lydian, or Lycian termination indicative of a place. Alabanda is one of numerous other examples. Τὰ Λαβρίανδα would be the natural name for The Place of the Axe, or of the god of the axe; and would be the natural parent of the other forms. The Greek and Latin authors, naturally, not knowing the significance of the word, added a gentile adjective termination to the name Labranda, from which the *d* could hardly vanish. But it would be perfectly natural for the Carian settlers in Cyprus to neglect the *d*, and call their deity by his epithet of character, not of place. Had they regarded place, they would have called him *Μυλάσεος*, or *Μυλασίων*, that is, of the Mylasians; for he was the local tutelary deity of the city Mylasa and the people immediately about it. Labranda was only a *κώμη* (see Strabo, *ubi supra*), its whole extent probably no more than the *peribolos* of the temple of Zeus, with its fountain of the tame fishes, and its grove of plane trees; sustaining much the same relation to the city Mylasa as the temple and peribolos of Artemis to Ephesus.

It follows as a consequence, in even pace with the foregoing, that the temple found by di Cesnola was one erected by Lycian or Carian settlers, and that the latter came from Mylasa or its immediate neighborhood. This temple is the only one known of that local deity, except the original one at Labranda. And when these immigrants set it up, doubtless they were unable (even if they knew the word) to call their deity Zeus *Labrandeus*, which would mean no more than the Zeus of the *κώμη* to which he had given the name—or who bore the name of the ensign of the Mylasians. They could call him nothing else than Zeus (Labruanios, Labraunios or) *Labranios*, the Mylasian Zeus of the Axe, the Zeus Stratios, of the camp and war.

The deity, though a local one, was ancient. The notices of Herodotus and Lactantius, not to mention these Cesnola inscriptions, show him to have been worshiped for a full thousand years.

That the axe was not found by di Cesnola among the fragments—where the heads were gone—need surprise no one. Indications, however, that this part of Cyprus was settled by Carians or Lycians are abundant in other directions. The

resemblance of the sculptures found about Amathus to those of Lycia has escaped the observation of no archaeologist (see, e.g., Cesnola's "Cyprus," pp. 264 ff.). But with the help of our inscriptions we fix the very home and city of these settlers. The resemblance of the name *Oliasas*, too, upon the first of the two inscriptions, to the Oliatos of Mylasa, mentioned by Herodotus (v. 37) as one of the Ionian tyrants, is not to be passed over. The entire structure of the name, both stem and termination, seems to be Carian. (Compare Steu's note in his Herod., Bd. iii. p. 36.)

And finally, it is noticeable, as bearing on the question of the origin of the Cypriote writing, that, save one fragment of three characters, and those not of the Paphian type, no Cypriote inscriptions were found within the limits of this Lycian or Carian settlement about Amathus; and that fragment is probably adventitious. The Cypriote inscriptions come from other regions in Cyprus, where the Lycian style of art or architecture seems to have left no traces.

If these facts stood alone, they would of themselves—and each singly by itself—bear strongly against the supposition of a Lycian or other Asia Minor origin of the Cypriote writing; but as it is, they only add one more to the numerous reasons against that hypothesis—a hypothesis which, however alluring, has always seemed to me to savor more of fancy than of fair or sound induction.

3. On a proposed edition of the *Kāuṣika-sūtra* of the *Atharva-Veda*, by Prof. Maurice Bloomfield, of Baltimore, Md.

In the summer of 1882 I went abroad, largely for the purpose of collecting materials for an edition of the *Kāuṣika-sūtra*, the chief ritual-book of the *Atharva-Veda*. Of this text there existed in Europe for a long time only a single fairly correct MS., No. 119 of the Chambers collection in the Royal Library at Berlin, catalogued by Weber, *Verzeichniss der Sanskrit-Handschriften*, p. 88 (cf. *Indische Literaturgeschichte*, 2d ed., p. 168). The date of this MS. is *sauvat* 1670, and a copy of it belonging to Prof. Whitney, and now in my possession, was the material I started out with.

Up to the year 1871, nothing new bearing upon the *Kāuṣika* had turned up in Europe, excepting certain copies from Indian MSS which were made for Adalbert Kuhn, and which are now, I believe, in the possession of Ernst Kuhn. I do not know what Indian MSS. they were copies of.

In 1871, Prof. Roth obtained through Prof. Kielhorn's mediation a copy of a *Kāuṣika* MS. of Elphinstone College, of late date (*circa* 1792), and of inferior value. It seems to stand in some genetic relation to the Chambers MS., as it shares many readings and blunders with the latter.

In 1874, Roth finished a collation of a MS. of the Pūna Deccan College, which had been sent to him by the Bombay government (cf. his *Atharva-Veda in Kaschmir*, pp. 13, 24): it is dated *sauvat* 1740, *circa* 1606. This contains many better readings than the Chambers and Elphinstone MSS., and is perhaps a copy of, certainly in some way related to, a MS. dated *sauvat* 1708, which I now have in my hands, and which will be mentioned below.

In 1878, Roth collated a MS. from Bikanir dated *sauvat* 1735; also a very fair MS.

Upon my arrival in Tübingen, Prof. Roth kindly allowed me to use his materials, and I had thus four readings of the text. But with all of them an even approximately correct edition would not have been possible; and I turned to India for help. Both Profs. Roth and Bühler aided me in a search in the Indian catalogues for MSS. of the text of the *Kāuṣika*; the latter also in a search for accessory texts of the *padhātī* and *prayoga*-class, which seemed likely to be useful in making the edition. I addressed myself to Mr. K. M. Chatfield, the Director of Public Instruction, who responded by sending for me last summer to the India House thirteen MSS., two of the *Kāuṣika* itself, and eleven small texts belonging to the *Atharva-Veda* in general. Dr. Rost at once sent them to Baltimore, and they are now in my possession.

The most valuable of these MSS. is a very excellent text of the *Kāuṣika*, older than any previously known in Europe. It is No. 86 of the paper MSS. catalogued in Kielhorn's report to the Director of Public Instruction for the years 1880-1; written *sauvat* 1708, therefore 230 years old, and in an excellent state of preser-

vation. I have derived as much help from it as from all the other text-MSS. put together. This MS. seems to be the source of the Pūna Deccan College MS. mentioned above, and is, as far as I have been able to find out, the oldest codex of the Kāuṣika which has as yet been catalogued or noticed.

The other Kāuṣika-text which I owe to the liberality of the Indian government is of very inferior value. It is MS. No. 150 of the collection of 1879-80, and a quite modern copy, corrected only in the first few *kaṇḍikās*; and later on it is in itself almost worthless.

Of the eleven small Atharva-texts, all but one are of subordinate value for the work in hand, though a few passages in the Kāuṣika are benefited by one or the other of them. I will merely mention their titles: 1. *ātharvavedasya antyeṣṭi-karma*; *sapīṇḍikarāṇāntakarmā 'tharvavedasya*; 2. *āsuri-kalpāḥ*; 3. *samānaya-prādhavidihiḥ pravaṇīkarmavidhiḥ ca* (sainvat 1883); 4. *atharvaturpaṇam* (sainvat 1794); 5. *ātharvānapramitāksarā* (author, Vasudeva); 6. *homapaddhatiḥ*; 7. *śodāṣopacārapūjā brahmavedasya*; 8. *anuṣṭhānapuddhatiḥ kauṣikoktānām karmāṇām* (a fragment of one leaf; has nothing to do with the Kāuṣika; the name Kāuṣika used for Atharvan in general; cf. Weber, *Ind. Lit.*, p. 170); 9 and 10 are *rahasya*-texts.

The eleventh MS., on the other hand, is of very direct value. It has the title: *daśa karmāṇi brahmavedoktāni*, and is nothing else than a *paddhati* to those parts of the Kāuṣika which treat what is strictly house-ritual. It begins with the *ijyatantra*, which is an amplification of the first *kaṇḍikā* of the 14th book of the Kāuṣika, and then turns to the *sainikāras*, from the *garbhādhānam* to the *caturthi-karma*. Like *paddhati*s generally, it gives the mantras in full, and with the regular accent marks, in red. On the other hand, those parts of the Kāuṣika which are especially Atharvanic in their character it does not touch upon at any point. It is a very modern MS., and winds up as follows: *sainvat 1867, paṭhanārtham paṇcolitrāmakaṣṇa, idaṁ pustakam vāraṇasiksetre kṛtvan tipikṭam*.

This text supplements in a very welcome manner the fragmentary commentary of the Kāuṣika by Dārila, which will be mentioned below. For the latter does not extend far enough to touch the *gṛhya*-material of the Kāuṣika, with the exception of the full and new-moon ritual in the first book and of the *pūṣasavana*, which is found among the *śtrikarmāṇi*, Kāuṣika iii. 11. (35); the *gṛhya*-material of the Kāuṣika is to be found almost entirely in books 7-12 and in book 14; for these the *paddhati* furnishes some help. Why the title is *daśa karmāṇi* is not clear, as there is no count by which the number of rites treated can be restricted to ten.

By far the most important factor in the edition is the fragmentary commentary to the Kāuṣika by Dārila. The only notice of the existence of a *kāuṣika-bhāṣya* is found in Haug's report of his journey in Guzerat in the winter of 1863-4, an extract from which is reprinted in the *Ind. Stud.* ix., p. 174. Haug simply mentions that he saw in Broach a MS. of the Sūtra with commentary, not giving the name of the commentator. My knowledge of the existence of this commentary is due to a correspondence with Prof. Weber, carried on in the summer of 1882; the text is part of a codex of Atharva-writings presented to the royal library at Berlin by Prof. Eggeling. The title is *kāuṣika-bhāṣya*, by Dārila-bhaṭṭa; it goes to the end of the second *kaṇḍikā* of the 6th *adhyāya*. The text is treated as though fairly at an end, at least as far as the immediate source of this copy is concerned, for we have a colophon at the end, with the date *śake* 1762. Of Dārila I have found no mention anywhere else, but '*pādas* of the teacher Vatsaṣarmaṇ' (*pādā upādhyāyavatsaṣarmaṇaḥ*) are cited in Dārila's comment. As the MS. was under no conditions to be removed from Berlin, I had to get a copy (in devanāgarī); and in this I was kindly aided by Dr. Klatt, the custos of the Indian Department at the library.

The MS. of this text is very corrupt, and the comment often very obscure; my repeated efforts to procure from India a complete copy, if such a one be at all in existence, have been unsuccessful. Yet I may fairly say that it forms the most valuable single factor in my materials. The MSS. of the text alone rarely divide the *sūtras*, and that is the chief difficulty in the more obscure parts of the text. For this, and of course also for the exegesis of many difficult passages, it has been very useful. It contains the explanations of a considerable number of Kāuṣika-words whose meaning has been either entirely unknown or misunder-

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10. The Commission has been informed that the Government of the Republic of Armenia has agreed to accept the findings of the Commission's investigation and to take the necessary measures to ensure that the rights of the victims are protected and that the perpetrators are held accountable. The Commission has also been informed that the Government of the Republic of Armenia has agreed to accept the findings of the Commission's investigation and to take the necessary measures to ensure that the rights of the victims are protected and that the perpetrators are held accountable.

Journal of Management Studies, 20(6), 791-806.

10. The following table shows the number of people who have been convicted of a crime in the United States since 1970, by race and sex. The data are from the U.S. Department of Justice, Bureau of the Census, and the U.S. Department of Education, Office of Education Statistics.

... ..

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...the fact that the *in vitro* and *in vivo* results are in good agreement, and that the *in vivo* results are in good agreement with the results obtained from the *in vitro* studies.

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...and the fact that the *Journal* is a journal of the American Psychological Association, the largest and most influential organization in the field of psychology, adds to the journal's prestige and makes it a must-read for all psychologists.

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— *Journal of the American Medical Association*, 1997

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the 1990s, the number of people in the United States who are 65 years of age or older is projected to increase from 20 million to 30 million, and the number of people 75 years of age or older is projected to increase from 10 million to 15 million (U.S. Census Bureau, 1996).

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...and the fact that the *Journal* is a journal of the American Psychological Association, which is a professional organization of psychologists, is a factor in the decision to publish the article.

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the 1990s, the number of people in the world who are under 15 years of age is expected to increase from 1.1 billion to 1.5 billion. The number of people aged 65 and over is expected to increase from 250 million to 450 million. The number of people aged 15 and over is expected to increase from 3.5 billion to 4.5 billion. The number of people aged 15 and over is expected to increase from 3.5 billion to 4.5 billion. The number of people aged 15 and over is expected to increase from 3.5 billion to 4.5 billion.

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...and the fact that the *Journal* is a journal of the American Psychological Association, the largest and most prestigious of the psychological organizations in the United States, is a source of great pride and honor for me. I am sure that the *Journal* will continue to be a valuable and important source of information for the psychological community and the general public.

— *Journal of the American Medical Association*, 1997; 278: 1033-1037

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borrowed from other languages have more than two syllables. Borrowed words abound, and are taken from a great variety of sources: from Laos, Cambodian, Malayan, and Chinese; a few from Peguan, Burmese, and Anamese; but by far the greater number from Sanskrit and Pāli. There may be said to be three styles: the idiom of the uneducated, consisting of pretty pure native words; the high or court dialect, composed in great part of Cambodian; and the religious or sacred, mainly Sanskrit and Pāli. There are five tones: the high tone or rising inflection, the common tone, the period tone, the depressed tone or falling inflection, and the emphatic tone or circumflex. Most syllables, otherwise phonetically alike, have two tones, making as many different words of them: but very few have as many as three tones. There are no inflectional endings, either of declension or of conjugation; such distinctions as are made, are made by means of auxiliary words and particles. The language has few adjectives; they follow the noun which they describe—as does also a noun used adjectively, or with the value of a genitive. The object noun follows the verb. The Siamese are a feeble folk, both physically and mentally. They are slow of apprehension, and have little perseverance in dealing with what causes them mental labor. The translation of western treatises into their language is attended with great difficulties.

5. On the Khasi Language, by Prof. J. Avery, of Brunswick, Me.

The people speaking this language occupy a district known as the Khasia and Jaintia Hills, and approximately included between the 25th and 26th degrees N. lat. and the 91st and 93d degrees E. long. They number about 170,000, and are divided into two principal tribes—the Khasias proper in the west, and the Jaintias or Syutengs in the east. They represent a truly aboriginal population, and, beyond a few obscure traditions, are able to give no account of an earlier home. In physical character they exhibit the Mongolian type. The interest attaching itself to their language is due, chiefly, to the isolated position which it occupies among the aboriginal tongues of India, differing too much to admit of classifying with any one of them; and to its morphologic character, on the border between the monosyllabic and the agglutinative types of speech. The Khasi has no indigenous literature, having been first reduced to writing by missionaries, who translated into it the New Testament and a few minor religious works. One of these missionaries, the Rev. W. Pryse, has given us a little grammar, combined with vocabulary and reading lessons, of 192 pages, Calcutta, 1855.

The sounds heard in Khasi are represented by 10 vowels, long and short, and 23 consonants, as shown in the following scheme: *ai ē ē ī ō u ā y; k kh g gh n; j jh; t th d (dh) n; p ph f b bh m; w l r; s sh; h*. The vowels are sounded as in German, except that *ō* is heard as in *hot*; the semi-vowel *y* is used by Mr. Pryse and others to represent the neutral vowel-sound in *but*. The consonants have, mostly, the same power as in English; but the aspirate mutes are pronounced as in Sanskrit, though *ph* is occasionally heard as *f*. The sonant aspirate *dh* occurs only in foreign words.

The Khasi rarely elides or assimilates letters. The only quotable examples of the former are the negative *ym* and the future sign *yn*, which regularly lose their initial letter after a vowel, e g. *ba'm* for *ba + ym*, *nga'u* for *nga + yn*. Rare instances of assimilation are *pylluit* for *pyn + lait*, *pyddiang* for *pyn + diang*; while forms like *pyndap*, *pynduh* are more common.

Though Khasi is usually classed among monosyllabic tongues, its words are by no means all monosyllables. Of Mr. Pryse's list of about 3200 words, nearly seven-eighths have more than one syllable; but a majority of these are easily separable into monosyllabic elements, each having an independent *status* in the language.

There seems to be no restriction as to the number or kind of letters which may form a Khasi root; though groups of consonants are not common, especially as finals. This language differs from all the other non-Aryan languages of India in possessing a complete system of gender. To every substantive in the language is ascribed a masculine or feminine quality, irrespective of its representing an object actually having sex. The feminine greatly preponderates, and is oftenest applied to abstract ideas and things unendowed with reason.

Gender is marked by distinctive names, or, more commonly, by the forms of the third personal pronoun. These are *u* for masculine, *ka* for feminine, and *ki* for plural of both genders: e. g. *u nong* 'he-citizen,' *ka nong* 'she-citizen,' *ki nong* 'they-citizen.' To remove the ambiguity of the plural, the word for 'male' or 'female' is added. These marks of gender always accompany nouns, except in occasional set phrases. They also serve to mark number.

Grammatical relations are denoted in Khasi by position, or, more often, by prepositions or by helping-words with more or less attenuated meanings. In contrast with this usage, the Dravidian, and, for the most part, the Kolarian and Thibeto-Burman families, employ suffixes and postpositions; while the Mon-Anam languages follow the example of the Khasi, and the Tai group uses both systems. The possessor is placed after the thing possessed in the Khasi, Tai, and Mon-Anam languages; but before it in the other groups named.

Adjectives regularly follow their substantives, taking the same gender-sign. They are usually formed by compounding with a root—verb, noun, or other—the prefix *ba*, which seems to be the relative pronoun. The adjective is thus a condensed relative clause: e. g. *ka ing ka balih* 'a white house,' lit. 'a house which (is) white.' Adjectives are compared by connecting with them the words *kham* 'more' and *tam* 'much': e. g. *balih* 'white,' *ba-kham-lih* 'whiter,' *balih-kham-tam* 'whitest,' lit. 'white more-much.' The Khasi has native names for numerals up to one hundred, but has borrowed Bengali names for higher numbers. The language is supplied with the usual pronominal words, except the possessive pronoun, whose place is supplied by a genitive construction: e. g. *ka ing jong nga* 'the house of me.' The personal pronouns are:

| | | |
|-------------------|--------|----------------|
| <i>nga</i> | I | <i>ngi</i> me |
| <i>mɛ</i> (mas.) | } thou | <i>phi</i> ye |
| <i>pha</i> (fem.) | | |
| <i>u</i> (mas.) | he | <i>ki</i> they |
| <i>ka</i> (fem.) | she | |

The change of *nga* to *ngi* etc. is the nearest approach to inflection that we observe in the language. The possession of a relative pronoun distinguishes the Khasi from most of the non-Aryan languages of India, a peculiarity which it shares with the Tai, the Cambodian, and the Anamese tongues. The Khasi verb, like the noun, has nothing corresponding to the synthetic forms of the inflecting languages; but, by the use of auxiliary verbs and adverbs, it manages to serve very fairly the needs of an unlettered people. The verb itself never suffers change. Number and person are left to be inferred from the subject. The tenses in common use are present, preterit, and future. The first is expressed by the simple root, *u leh* 'he does'; the second employs the adverb *la* 'since,' *u la leh* 'he did'; the third uses a sign *yn*, *u'n leh* 'he will do.' Progressive, or impending, action is indicated by the adverb *dang* or *sa*: e. g. *u dang leh* 'he is doing,' *u la dang leh* 'he was doing,' *u'n sa leh* 'he is about to do.' A perfect and a pluperfect tense, formed by the auxiliary *lah* 'to be able,' sometimes occur: e. g. *u dang lah leh* 'he has done,' *u la lah leh* 'he had done.' The same collocation of words, or with the substitution of *nang* 'to know' for *lah*, seems also to serve for a potential mode: e. g. *u lah* (or *nang*) *leh* 'he can do,' *u la lah* (or *nang*) *leh* 'he could do.' The simple root, preceded, commonly, by the adverb *to* serves for an imperative: e. g. *to leh* 'do.' This mode is usually confined to the second person, in which case the subject is not expressed. The root, preceded by *ban*, is said to represent an infinitive; but this word is evidently compounded of *ba* + *yn*, so that *u mon ban leh* 'he wishes to do' is more exactly 'he wishes that he shall do.' To express a present participle *da* is used, *da leh* 'doing,' and to form a past participle *ba-la*: e. g. *ba-li-leh* 'done'—an adjective form, or, more strictly, an abbreviated relative clause. The verb has no passive voice, but uses in its place an impersonal construction; thus, *u leh kane* 'he does this,' but *leh ia kane da u* 'this is done by him,' lit. 'it does this by him.' The thought is, however, generally so expressed as to avoid this construction.

The structure of the Khasi sentence is direct and simple. The normal order is: the subject followed by its modifiers, verb-auxiliaries, verb, object, and adverbial adjuncts. The copula, *long*, is usually omitted. The relative clause regularly follows its antecedent clause.

The language shows great aptitude for compounding words, giving it the aspect

of the agglutinating tongues; but its compounds rarely suffer change in the process, and readily fall apart into their elements. The most familiar compounds are: two verbs, of which one specializes the meaning of the other, as *aiŋguh* 'to offer thanks,' from *ai* 'to give' and *nguh* 'to thank;' a verb and noun, as *ka aiei* 'offering,' from *ai* 'to give' and *ei* 'thing;' a verb and adverb, as *lehnoh* 'to give it up,' from *leh* 'to do' and *noh* 'off.'

There is another sort of compounds, of a closer character: of which one member has, in some degree, sunk to the position of a servile word, and forms classes of words, like a true prefix. Some of these words are: *nong*, forming nouns of agency; *jing*, abstract nouns; *pyn*, causal verbs; *ia*, verbs denoting reciprocal action. The first two occur as independent words. It is said that the language employs tones to help out its scanty vocabulary, but of this we cannot speak definitely.

The Khasi is feeling a decided influence from the superior Aryan civilization on its borders, and has borrowed many foreign words, especially from the Bengali. These words are somewhat mouthed over in becoming naturalized, but their identity is seldom greatly disguised. It is impossible to state the proportion of foreign to native words in the language, but the number is so rapidly increasing as to bid fair, in the opinion of some, to speedily extinguish the native speech.

6. On the Egyptian and Old Babylonian Theories of the Origin of the Phœnician Alphabet compared, by Rev. John P. Peters, of New York.

The recent publication of Taylor's "Alphabet," and the treatment there given to de Rouge's theory of the Egyptian origin of the Phœnician alphabet as an absolutely proved fact instead of a still unproved theory, have induced me to preface my presentation of my own theory by a criticism of that part of Taylor's book which deals with this subject. In answer to the objection that the Egyptian and Phœnician letter-names resemble each other neither in meaning nor outward form, Dr. Taylor adduces the derivation of the Russian alphabet from the Greek etc. (vol. i. p. 119). By an application of the acrologic principle, *beta* became *buki* 'beech,' *deltu* became *dobro* 'oak,' etc. From this analogy he argues (p. 120): "Hence new acrologic names, significant in Semitic speech, would naturally be invented, as in other borrowed alphabets [this is, I believe, a very exceptional course; cf. the derivation of the Greek, Ethiopic, etc., from the Phœnician, Latin from Greek, etc.], with the object of making it easy to connect the forms and values of the several characters." This fails to answer the objection, for the reason that a number of the letter-names have no significance in "Semitic speech." The mode in which significance has been found by those whom Dr. Taylor has followed is this: the Hebrew letter-names as they stand have been treated as the original Phœnician names, no comparison being made with the Greek, Samaritan, Ethiopic, Syriac, etc.; words resembling these names have been sought in any Semitic language; and if any similar word is found in any one language, the given letter-name is declared to be "significant in Semitic speech." The most extreme example is the letter-name *lamedh*. In Judges iii. 31 occurs the *ἀπαξ λεγόμενον* *malmadh*, meaning, apparently, 'ox-goad.' From this isolated derivative, the meaning of which must be guessed from the context, *lamedh* is proved to be "significant in Semitic speech," and to mean "ox-goad." Besides *lamedh*, the letter-names for which no tenable etymologies have been offered are *hē*, *zain* or *zui*, *cheth*, *teth*, *ṣadhe*, *koph*; and uncertain are *gimel*, *samekh*, *pē*, and *shin*.

Dr. Taylor says (vol. i. p. 122) that the "Egyptian alphabet" consisted of twenty-five letters, of which some were vowels. If the Phœnician alphabet was taken from the Egyptian, the loss of the vowels seems utterly unaccountable. Different as may be the Indo-European and Semitic conceptions regarding vowels, it cannot be said that they do not exist in the Semitic languages, nor that the need of some mode of expressing them to the eye has not been felt. *Aleph*, *hē*, *vav*, *yodh*, and even *ʾain*, have to do double duty, and have made decided progress towards becoming themselves vowels: and this, too, at an early period, as may be seen from the Greek alphabet. Later this need was supplied in Hebrew, Syriac, and Arabic by new signs, or by points. Ethiopic and Mendaite developed

the alphabet into a syllabic system in their efforts to remedy the defect. That part of the history of the Semitic alphabet which we know argues strongly against the theory that it was borrowed from an alphabet possessing vowels distinct from consonants.

Dr. Taylor argues also as to the chronological probabilities of the derivation of the Phœnician alphabet from Egypt. So he says (i. 145): "The Semitic occupation of Egypt lasted for several centuries. The origin of the Semitic alphabet is connected with this occupation by three distinct lines of evidence. The first is external. The sojourn of Israel in Egypt is nearly synchronous with the Hyksos period. Before the Hebrews went down into Egypt the art of writing was unknown to them; when they came out of Egypt they possessed it. The inference seems clear—it must have been acquired from the kindred races who occupied the Delta." This whole statement is a tissue of unproved assumptions, and the chronological argument drawn from those assumptions must be classed as worthless. It is exceedingly desirable, in the present state of our knowledge, to leave Hebrews and Hyksos out of the argument. The intercourse of the Phœnicians with the Egyptians, hence the possibility of their borrowing a system of writing from them, even the probability of their doing so, provided they did not already have one of their own, will be conceded.

Another theory is: that the Phœnician alphabet is an independent invention of the Phœnicians themselves. This is contrary to our knowledge of the laws of nature, and has, I believe, few or no adherents at the present day.

Deecke (Z. D. M. G. xxxi.) assigned the origin of the Phœnician alphabet to the new Assyrian cuneiform, an anachronism which needs no further disproof. We seem, so far as our present knowledge enables us to determine, to be limited to three possibilities: an Egyptian origin, some of the objections to which have just been considered; a Hittite origin, for which at present the argument could not be more than the negative one of failure to prove anything else; and the origin from the old Babylonian cuneiform writing.

Classical tradition ascribes to the Phœnicians a Babylonian origin. Phœnician tradition, so far as we know it, and Hebrew tradition, are divided, being both for and against such an origin. Movers, in his *Phönizische Alterthum*, argues against the Babylonian origin, but rests his argument mainly on linguistic grounds. Later discoveries of the close linguistic affinity of the two peoples, their essential identity in religion, the use of Babylonian weights and measures among the Phœnicians in the earliest times of which we have knowledge, with other striking similarities of use and custom, would to Movers himself, as I believe, reverse his argument. If the truth of the tradition, supported by such corroborative proof from close connection of language, religion, and civilization be admitted, a strong *a priori* argument for the old Babylonian origin of the Phœnician alphabet is at once established. It is probable that if the Phœnicians came from a country where a system of writing was not only in use, but actually applied to a Semitic language, they would have brought a knowledge of that system with them. The Phœnician alphabet would be an evolution from that system under new circumstances and conditions. If this tradition be not accepted, the argument of *a priori* probability is still, I believe, stronger than that for the Egyptian theory. That there was a close commercial intercourse between Phœnicia and Babylon in the earliest times is shown, among other things, by the use of Babylonian weights and measures among the Phœnicians before the 16th century B. C. The adoption of the weights and measures is a strong argument for the adoption of the system of writing also. Phœnician civilization may fairly be said to be borrowed from the Babylonian; it is strange if in one point, and one point only, the Phœnicians should have borrowed from the Egyptians instead. It will be answered that the Egyptian alphabet had reached the alphabetic stage, while the Babylonian cuneiform was still a complicated combination of syllabic and ideographic signs. Admitting the very early development of the so-called Egyptian alphabet, it must be said that the Egyptians themselves never used it. The system of writing in actual use and with which the Phœnicians would have come in contact was about as complicated as that used among the Babylonians. In favor of the adoption of the Babylonian rather than the Egyptian system of writing was the close connection of language. There is an immense gap, it must be acknowledged, between the complicated cuneiform of Babylonia and the completed alphabet of Phœnicia.

The Egyptian theory does give us something to fill up the gap; we can by that theory show the stages of development. The earliest examples of the Phœnician alphabet which have yet been discovered date, perhaps, from 900 to 1000 B. C. certainly no earlier. From Egypt, Babylonia, and Assyria we have documents of a much earlier date. It is assumed, and apparently is a well proved fact, that the Phœnicians had some system of writing from 500 to 1000 years before the date of the earliest monument of their alphabet which we possess. What is the reason of this lack of monuments? Assuming for an instant the truth of the old Babylonian theory, it is not impossible that it may be due to the transition going on from cuneiform syllables and ideograms to real letters, and that the year 1000 B. C. may represent approximately the era at which the alphabet became fixed. Transitional types, it must be remembered, tend to disappear, as has been well shown in the history of evolution in the field of natural science. Turning to the forms of the letters themselves, we find the degree of resemblance between the Egyptian hieratic and the Phœnician and the old Babylonian cuneiform and the Phœnician about the same. The Phœnician letters might have been developed from either; intermediate forms are necessary for a conclusive proof, so far as form is concerned, of such development in either case. As Dr. Taylor himself says (i. 353), letter-names are an evidence more reliable than letter-forms, and it is on the names that I place most reliance in the endeavor to prove the old Babylonian origin of the Phœnician alphabet. The accompanying table gives some specimen letters, in the identification of which I feel a tolerable degree of confidence.

Aleph 'ox' is the Babylonian *alpu* 'ox.' *Ἀλφα, βῆρα*, etc., owe their final *a* to no Aramæan influence, as Dr. Taylor holds. There is a sufficient number of examples of the Hellenization of Hebrew words by adding an *a* and making them indeclinable to justify us in saying that the Phœnician letter-names were similarly treated.

Bêth, βῆρα, is Babylonian *bîtu* 'house.'

Gimel. Greek *γάμμα* and Samaritan *gaman* lead me to suppose that the ground form was *gam*, the syllabic value of the old Babylonian character. The Greek letter-names present presumably the nearest approach to the Phœnician originals. The oldest forms of the Hebrew names which we possess are the Greek transcriptions in the LXX. translation of Lamentations. These are not old; moreover, there is considerable variation of manuscripts. The fact that some of the letter-names were real words probably caused in Phœnician a tendency to assimilate names derived from syllables to words which they resembled in sound. The same tendency was at work in Hebrew. The Hebrew names as we have them seem to show Aramæan influences also. The derivation of some of the letters from ideograms and some from syllabic signs will explain the difficulty as to the significance of the letter-names in Semitic speech. As to the outward form of this letter, when straight lines are substituted for wedges we have two straight lines (somewhat as in the bracketed form) running into one another. For convenience one of these lines was placed at an angle with the other.

Daleth 'door,' Greek *δέλτα*, is Babylonian *daltu* 'door.' The three preceding letters have been taken from exceedingly common Babylonian signs. This sign, however, is not common in this value, for which cf. II. R. 44 no. 5 and V. R. 13. 5, 6, 7a, b. The same sign in the syllabic value *ru* was the original of the letter *rêsh*. The original Phœnician name is preserved in the Greek *ῥω*. The Phœnician word for 'head' is *rush* (𐤒). The similarity in sound seems to have led ultimately to an assimilation, and the letter-name adopted by the Hebrews was *rush* or *rosh* 'head,' which was written, as in the Phœnician, defectively, with only two radicals. The pronunciation of the Hebrew letter-name which we now have seems due to the influence of the Aramæan *rêsh*, which is both the name of the letter and the word 'head.' The original identity of *rêsh* and *daleth* is shown by the identity of characters in the Abu-Simbel and Thera inscriptions, the Aramæan signatures to Assyrian contract tables, the Eshmunazar sarcophagus, and elsewhere, as well as by the antagonistic methods of differentiation pursued in various Greek and Italic alphabets, as shown by bracketed forms in the table.

Zain. Greek *ζῆτα* and Ethiopic *zai* suggest *za* or *zai* as the original form, the *ta* of the Greek being due to the influence of *ῥτα*. The Syriac name was *zē, zai, or zain*. In the Hebrew there is a question as between *zai* and *zain*, the better text in Lamentations (LXX.) being apparently *zain*, while, on the other side,

Eusebius gives the pronunciation as *zai* (*Præp. Ev.* x. 5). The latter seems the more original, the former may be due to the influence of the Aramæan word *zainah* 'arms.' The common value of the Babylonian character was the syllable *za*.

Yodh. From the concurrence of Greek etc., this seems to have been the original Phœnician name. The root is common to all the Semitic languages, and means 'hand.' The Babylonian character is common in the meaning 'hand,' and is plainly the picture of five outstretched fingers. In a late Babylonian form of the same, two fingers have disappeared. There was a similar evolution in the case of the early Phœnician character, and the thumb was twisted around.

Mém. The Greek gives the original form as *μῦ*, which is the common syllabic value of the Babylonian character. This coincided in sound with the Phœnician *mu* (𐤎) 'water,' which led to the identification of the word and the letter-name, and the consequent translation of the latter into the Hebrew word for 'water.'

'Aïn. For this no Egyptian original is offered by Dr. Taylor. It means 'eye,' which is also the common meaning of the old Babylonian character (𐤀). Its Greek form, *ὀ-μικρον*, is justified by the Phœnician use of the letter as *o*.

Tau I believe to be, as the name suggests, a mere 'mark' or 'cross' added as a letter at the end of the already formed Phœnician alphabet, just as new Greek and Latin letters were made and added. The simplest character to form is a rough X or cross, as is shown by our use of the same for the signature of illiterate persons. That the same rough X was used as a signature among the Hebrews also seems to be proved by Job xxxi. 35. This simple cross-stroke was utilized by the Phœnicians to furnish an additional letter when one was required; and in the same way, as it seems to me, originated the *χ* of the Greeks, our *X*.

These letters will be sufficient as specimens to show the method of identification which I have pursued. The forms bracketed in the old Babylonian column are given by Oppert and Ménant, the rest I have myself identified. The old Semitic forms are meant to show the oldest known types.

I may add that classical tradition is about equally divided between the Egyptian and Assyrian (i. e. Babylonian?) origin of the alphabet.

| Hebrew name. | Egyptian. | | Old Semitic. | Old Babylonian. |
|--------------|-------------|-----------|--------------|-----------------|
| | Hieroglyph. | Hieratic. | | |
| Aleph | eagle | 2 | 𐤀 | 𐤀 |
| Bêth | crane | 𐤁 | 𐤁 | 𐤁 (𐤁) |
| Gimel | throne | 𐤂 | 𐤂 | 𐤂 [𐤂] |
| Daleth | hand | 𐤃 | 𐤃 (R) | 𐤃 (𐤃) |
| Rêsh | mouth | 𐤄 | 𐤄 (D) | 𐤄 (𐤄) |
| Zaïn | duck | 𐤅 | 𐤅 | 𐤅 |
| Yodh | parallels | 𐤆 | 𐤆 𐤆 | 𐤆 𐤆 |
| Mém | owl | 𐤇 | 𐤇 𐤇 | 𐤇 𐤇 |
| 'Aïn | | | 𐤈 | 𐤈 |
| Tau | lasso | 𐤉 | 𐤉 | |

7. An account of the Arabic Bible of Drs. Eli Smith and Cornelius V. A. Van Dyck, by Prof. I. H. Hall.

This was a paper prepared at the request of the Society, and consisted first of a written account by Dr. Van Dyck himself, and next of other particulars obtained through correspondence and inquiry, from a number of other sources.

Dr. Van Dyck's account first presented an abstract statement of previous Arabic versions. The first known was that made under John, bishop of Seville, from the Latin Vulgate, about A. D. 750. This is extant in Spain, but never reached the East. Rabbi Saad Ghidgaon, commonly known as Saadias of the Babylonian school, translated the Old Testament from Hebrew into Arabic, for the use of Arabic-speaking Jews. This was in the ninth century. The Pentateuch was published in Constantinople in 1546, in Hebrew characters; then in Paris in 1645, in Arabic characters; and in London in 1657.

"Abu Said the Samaritan," date unknown, but between the 10th and 13th centuries, made a translation of the Pentateuch. A few copies have been found in Syria. This was edited by Juynboll, of Leyden, and published a few years after his death.

An unknown Jew of North Africa made an Arabic translation of the Pentateuch in the 13th century, which was printed in Europe in 1622.

A translation of the prophetic books from the LXX. was made by a Jew of Alexandria in the latter part of the 10th century. It was printed in Paris in 1645, and in London in 1657.

There are extant parts of the historical books made from the Syriac in the 13th and 14th centuries. Some have been printed in Europe; and occasional fragments are found in Eastern countries.

The version of the Psalms used by the Pupal Greek church is a translation of the LXX. made by Abdallah Ibn el-Fadl in the 12th century. It was printed in Aleppo in 1706, and in London, 1725. Another version was printed in Genoa, 1516, and in Rome, 1614; and a third, apparently from the Syriac, was printed at Shuweir, Mt. Lebanon, in 1610.

Of versions of the New Testament little is known. The four Gospels seem to have been extant in Arabic since the 7th century, and the other parts since the 9th and 10th. Several versions of the whole New Testament are extant: some made from the Syriac, some from the Greek, and some from the Coptic. The four Gospels were first printed at Rome in 1591, and the whole Testament in Holland, 1616, in Paris, 1645, and in London, 1657.

Early in the 17th century, Sarkis er-Rizz, a Maronite bishop of Damascus, got permission from the Pope to gather and compare copies of the Arabic Scriptures, and make a new version. He began the work in 1620. He reduced all to conformity with the Vulgate. This version was printed at Rome, about 1671, in three folio volumes, with the Apocrypha. It was (without the Apocrypha) adopted by the British and Foreign Bible Society, and printed by them, and circulated in the East by all missionaries until the new version was made.

It is said that the Sultan Muhammad II. ordered a translation of the Old Testament to be made from the Greek into Arabic, but it is not known whether the work was ever executed.

Between 1840 and 1850, Fares esh-Shidiak and Prof. Lee, under the auspices of the Church Propagation Society, made a version of the entire Bible into Arabic. In this the mistakes of King James's English version are copied. It seems that Shidiak translated from the English, and Leo was supposed to reduce it to agreement with the Hebrew. It was printed between 1851 and 1857, but never came into use.

As far back as 1837, the missionaries of the A. B. C. F. M. in Syria were considering the idea of a new version. Dr. Eli Smith began his labors upon Arabic type chiefly with that object in view. His type was ready by 1843, but ill health and domestic affliction prevented his actual beginning of the Bible till 1848. He commenced with the aid of Muallim Butrus el-Bistani, a good Syriac scholar, who first studied Hebrew with Dr. Smith. He made the first draft, and Dr. Smith carefully revised it. As soon as a form was ready, it was put in type, and a copy sent to each missionary in the entire Arabic field, as well as to any other Arabic scholars near enough at hand. These proofs, with any suggestions, emendations,

or corrections, or objections, were sent back to Dr. Smith, who made a careful review with their help. He began with the Old Testament, but soon thought best to leave this and proceed with the New Testament. He left a basis of the entire New Testament, but nothing of it was put in type.

Dr. Smith adopted no known text of the Greek, but selected from Tischendorf, Lachmann, Tregelles, and Alford, as he thought fit. He had gone on far with the New Testament before Alford was published, and he stopped until he could go back and compare what he had done with Alford. On his death-bed he said he "would be responsible only for what had been printed;" namely, Genesis, and Exodus with the exception of the last chapter. Dr. Van Dyck edited the last chapter of Exodus after Dr. Smith's death, which took place in January, 1857; but for a year previous the latter had been able to do nothing at the translation.

In the fall of the same year Dr. Van Dyck (then at Sidon) removed to Beirut and assumed the care of the Press, and continued the translation. It was then first found out that Dr. Smith had followed no published text of the Greek, a thing which the Bible Society could not allow; and the whole New Testament had to be done over. Dr. Van Dyck was directed to begin and finish the New Testament before proceeding to the Old; and also, to follow the Received Text (*i. e.* the ordinary English editions professing to reproduce Mill), but with permission to put in as many various readings, in foot-notes, as desirable, especially where the text differed from the Syriac or from any known version in Arabic. Dr. Van Dyck availed himself largely of that permission. He followed the same plan as Dr. Smith in sending out proofs, and using the suggestions of all that were returned to him. Some of the more difficult parts of the Old and New Testaments were kept in type for several months, till he could get the criticism of Rödiger and Fleischer from Halle and Leipzig. He has still their criticisms on the Song of Deborah and other difficult passages. Thirty copies of each proof were distributed as above stated, and the version thus really embodied the work of a large number of Arabic scholars.

The translation was finished Aug. 23, 1864, and the printing of the first edition March 29, 1865. The New Testament had been finished and printed in 1860—a "reference" edition, with parallel passages noted in the margin.

Dr. Smith's immediate assistants were the Sheikh Nasif el-Yazigi and M. Butrus el-Bistani. Dr. Van Dyck's assistant was the Sheikh Yusuf el-Asir, a Muslim and a graduate of the college of the great mosque of el-Azhar in Cairo. Dr. Van Dyck preferred a Muslim to a Christian, as coming to the work with no preconceived ideas of what a passage ought to mean, and as being more extensively read in Arabic literature.

The Jesuits have issued a translation made by them with the assistance of Ibrahim el-Yazigi, son of Dr. Smith's former assistant, and printed in three large 8vo volumes. It is a fair translation generally, and only differs in very slight particulars, so far as Dr. Van Dyck has examined, from his own; and that only for the sake of differing from the Protestant version.

The first part printed of the new (Van Dyck's) version was the New Testament, reference, 12mo, pp. 624. That was [reproduced in small 12mo, pp. 596, and other forms, and] followed by the entire Bible, reference, 8vo, then a voweled New Testament, 12mo, and 16mo without vowels. Dr. Van Dyck then went to New York (1862-5), and in the Bible House got out electrotype plates of a plain 8vo Bible. These plates are still in use, and show very little wear. At present [1883] Dr. Van Dyck is engaged in correcting them where small breakages have occurred, in printing so many editions from them.

After two years he returned to Beirut with Mr. Samuel Hallock, and they made there electrotype plates of four sizes of the entire Bible, one voweled entire; and three sizes of the New Testament, one voweled; and one set of voweled Psalms in 12mo; in all, between 10,000 and 11,000 plates. Some of these were made after Dr. Van Dyck left the Press, and through oversight of the proof-reader do not altogether conform to the standard copy which he left for comparison. In that way some slight discrepancies have crept in which Dr. Van Dyck is [1883] correcting—re-reading all, so as to make all the plates conform minutely to the same standard, as well as to repair any broken letters or vowel points.

The British and Foreign Bible Society have also electrotyped two editions of the entire Bible of this version, besides several separate parts.

To this account of Dr. Van Dyck were added a few notes, bibliographical and supplementary, with matters, obtained from divers sources, which seemed to be of interest or use. This additional matter was of about equal bulk with Dr. Van Dyck's account. It contained further notice of Dr. Smith's work in persuading the missionaries in the field, and their supporters at home, of the necessity, 1. of a new version of the Bible; 2. of a printing press at Beirut instead of doing the work at Smyrna, nearly a thousand miles away, among people of a different language; 3. of the necessity of having a moderate critical library for the translator; 4. of the necessity of having good fonts of Arabic type; and also some further details of Dr. Smith's manner of working. It was also shown (a fact that Dr. Van Dyck did not mention) that Dr. Smith's MS. translation of the New Testament was destroyed by fire, and that Dr. Van Dyck derived no help from it. Dr. Van Dyck was also assisted by his son Edward as a copyist, and in the selection of Old Testament references for the margin.

Some further notice of Dr. Van Dyck's and Dr. Smith's native assistants was also given; the Sheikh Nasif el-Yazigi having been a noted grammarian, and commentator on Ibn Akil; and M. Butrus el-Bistani being a successful teacher and journalist, as well as author of the *Mohut el-Mohit*, a large dictionary which answers in Arabic to our Webster or Worcester, and of an Encyclopædia in Arabic, of which several volumes were issued, but of which much remained unfinished and unpublished at his death in (1881 or) 1882.

Some notice was given of Dr. Van Dyck's and Dr. Smith's other works published in Arabic; and of the estimation in which they were held by natives as scholars. The mission has never had another man whose fitness for such a work at all approached theirs, or in whose translation the natives would (not to say could) put confidence. Indeed, to Dr. Smith alone is due the credit of originating the enterprise, and fighting the battles, both at home and in the field, which made the existence of the new version possible. Dr. Van Dyck went out to Syria in 1840. It is to these two men that the great work done in Syria is chiefly due; not to mention the exchange among the natives of a manuscript for a printed literature, the bringing to Europe and America of a multitude of accretions to the knowledge of Oriental literature, and the improvement, in every way, of the condition of things in respect thereto, in both the East and the West.

8. Notes on the Nandinī Commentary to Manu, by Mr. E. W. Hopkins, of New York City; presented by the Corresponding Secretary.

The object of this paper was to show that the author of the gloss called Nandinī on the law-book of Manu—1. is not a strict follower of the Kullūka school of interpretation; 2. is not a strict follower of the Medhātithi school; 3. had a text differing from that of either of these schools; and 4. was ignorant of many points of dispute between the two. The data are drawn from a MS. in the Grantham character belonging to the East India Office, and inscribed *Manava-dharma-śāstra* viii. and ix., with Nandanācārya's commentary *Nandinī*." The illustrations are taken from the eighth book only.

1. A follower of the Kullūka school is one who, like Rāghavānanda, rarely deviates from Kullūka's text or explanations except in trifles. Such a one the author of the Nandinī was not; witness (among others) the following deviations from K., agreeing often with M. (sometimes, in slight *var. lect.*, supported by Rāghavānanda): v. 13. *sabhā* . . . *praveṣṭavyā* M. R. N.; 93. *śatrugrāham* M. R. (gloss) N., *-kulam* K.; 221. *eva* M. N., *etam* K.; 287. N. supports M. (*prāṇa* = *śāla*), and the whole gloss resembles that of M.; 314. M. notes as a *v. l.* K.'s reading *dhūvatā*, but prefers *dhimata*, which N. has; 330. *alpeṣu* M. N., *anyeṣu* K.; 359. M. and N. understand the persons punished to be "a *ksatriya* and the other (lower castes)," K. says a *śūdra* is meant, from the very nature (harshness) of the penalty. Further, 40. M.'s explanation that the money is to be paid from the king's treasury, not found in K., is supported by N.'s gloss *koṣāḍ vā*; 98. M. and N. agree in understanding *puruṣaṁśṛta* to refer to ownership of a slave, an explanation not given in K.; 392. K. explains "the neighbor next and next but one," M. and N., "the one opposite and next back."

2. On the other hand, N. often agrees pointedly with K. against M.; note the

following (among other) examples: vv. 32-3 (N. 30-1), in M. the order is inverted; 64. *sahīya*, M. 'sureties,' K. N. 'companions'; 68. *sadr̥ga* of general similarity M., restricted to caste K. N.: 296. N. agrees with K. in making the penalty a thousand *paṇas*, while M. makes it death, of which the "half" is mutilation.

3. There are points (some of them unimportant) where N. agrees neither with M. nor with K.: thus, for example, v. 65. *lingastha*, 'student' M. K., 'ascetic' N.; 151. 415, explanations given in K. are ascribed by N. to *ke cū*; 159. *kāraṇam*, not 'writing' M., but = *sīkaraṇam* N.; 209. *ādhāne* = *agnyādhāne* N., not so M. K.; 210. N. gives a different explanation from that of M. and that of K. (and other authorities). A number of further peculiarities of reading in N. were pointed out. Sometimes it seems as if the simpler explanation of N. was based on a more primitive style of exposition: e.g. at v. 192, M. and K. say 'without distinction of deposit,' but N., more harshly for the Brahman, 'without distinction of caste'; 243. N. explains 'ten times' of the amount spoiled, while M. and K. make a forced reference to the income-tax of the king, which by their rule would amount to half as much again as the whole crop.

4. Examples of significant silence on the part of N. as to points discussed in K. or M., or where their explanations differ, are found at v. 319, as to whether a *mūṣa* of gold is meant; 190. as to the "methods," N. saying simply "all other than the one spoken of;" 73. as to *devijottama*; at v. 37 we find only *apastak*, while M. and K. disagree as to the meaning; and so on. It must be confessed that N. occasionally wears a modern aspect, as in reading in v. 283 *nāstikāyām* for the obscure *dādhikeyām* of the ordinary text; or in rendering *gīpralopakam* at v. 309 'one who deserts a Brahman,' thus with Rāgh. finding in it *vipru* 'priest,' instead of the prepositions *vi* and *pra*; but in this very verse is given by N. a reading (*asatyam ca nṛpaṁ tyajet*) noted in M. as met with; and a little further on (v. 325), a definition referred to in M. as that of "others" is found in N.

Under v. 152 is given a quotation from Brhaspati, like that given by K., yet consisting of only one verse, and that having a v. l. as compared with K.'s version.

The verses numbering in K.'s text 8, 11, 74, 81, 332 are wanting in N., and there are instances of a difference of order: especially after vv. 99 and 180. N. has also three and a half new verses, of which only one is supported by the gloss; the others are apparently explanatory, and perhaps marginal amplifications slipped into the text.

Whether a comparison with Govindarāja and Nārāyaṇa would show any special similarity between them and the Nandinī, I am unfortunately at present unable to determine, not having access to them. Enough has been said to show that the Nandinī deserves some notice as a commentary, were it only for the support it gives the more important ones on conflicting points. It appears very free from the "by all means save the Brahman" spirit of Kullūka; and, but that it is unknown to the older commentaries, it might well be regarded as quite ancient—though much that is apparently antique in it may be the result of geographical difference. As it is, however, when we reflect that many of its readings coincide with those of the earliest extant commentator, Medhātithi, and that some are yet older, agreeing with those of the "some" and "others" referred to by Medhātithi as his predecessors, we may not be far wrong in hazarding the opinion that the Nandinī has preserved much that is old in its text and explanations. On its original vagaries we cannot lay much weight; but some of these are interesting from their very uniqueness.

The possibility of the existence of other commentators than those known to us by name—Medhātithi, Govindarāja, Mādhava-Sāyaṇa, Kullūka, Nārāyaṇa, Rāghavānanda is the whole list—is hinted at by Kullūka himself, when he says that he cannot support the explanation of Govindarāja in one or two passages (as iii. 127), "because it is not supported by Medhātithi and following [commentators, who are] older than Govindarāja" (*medhātithiprabhṛtibhir govindarājād api vṛddhatarāṇāṃ anabhyupatṛāt*). As Rāghavānanda mentions the commentators known to him as "Kullūka, Nārāyaṇa, Govinda, Medhātithi," it might be rash to suggest that Nandana is one of the *vṛddhatara* (Rāghavānanda, however, does not notice Mādhava in this list); yet he may have preserved much from some of these "elders;" and, being geographically separated from the influence of the other commentators, he may represent to us more or less that lay behind them.

9. On the professed Quotations from Manu found in the Mahābhārata, by Mr. E. W. Hopkins; presented by the Corresponding Secretary.

Of this elaborate paper (offered as the first of a series of studies on the legal data found in the epic), only the main points are given here in abstract. Its intent was to examine the precepts ascribed to Manu by the compilers of the Mahābhārata; and especially, to see what light the habit of this great work casts upon a certain usage, common in works on law, and occasionally employed in the law-book attributed to Manu himself—that of emphasizing a remark or rule by adding “Manu said”—or something equivalent. It is the personal Manu referred to in the epic, not the quotations from the *mānava-dharma-sūtra* at large, that are here had in view.

The paper begins with an exposition of the sources of law professedly held by the Mahābhārata, which are not much different from those acknowledged in Manu itself, namely custom, the usage of the good, etc. Among the many authorities referred to, no special distinction seems to be awarded to one over another. Manu sometimes heads the list, but sometimes not; there is certainly no tendency to refer as ultimate authority to a code of Manu. Passages are found, and even ascribed to Manu, which are against both the text and the spirit of the law-book. Manu himself appears in the epic in various characters: as law-maker, king, demigod, and creator; and the genealogy given him is a very mixed and changeful one; the chief mythology about him is a late product.

The quotations ascribed to Manu were reviewed in detail, being divided into three groups, as found respectively in the earlier books, the twelfth, and the thirteenth book; and added remarks in each case show its relation to the present text of the law-book known as Manu's. A summary of the results shows that of the 33 quotations, 8 occur in books i.-xi., two being traceable in the law-book and six not so; of the 15 in book xii., eight are traceable; of the 10 in book xiii., seven are traceable. Of the 17 thus ranked as traceable, only five are verbal quotations; the rest agree in doctrine merely.

The received explanation for the untraceable quotations is that they come from an older recension of the Manu-treatise, in which they were contained. This is facile, but far from satisfactory. All probabilities are against the treatise having ever been longer than it now is; the law-books grow, not contract, with time. Another view may be presented, with all due diffidence. Manu and Manu's law-book are very different. Manu is an ancient sage, a demigod; a quotation of his opinions was decisive; but the law-book is a thing seldom quoted, and chiefly in the modern part of the epic. It may be inferred then that the treatise was worked out between the time when the bulk of the epic was composed and its final completion; that there existed previously a great number of sententious remarks, proverbial wisdom, moral precepts, etc., ascribed to the ancient hero Manu as a type of godly wisdom, and floating in popular currency as “Manu's laws;” and these were welded into one with the “laws of the Mānava sect” or school. The latter may have built up their own *sūtra* and *kuladharma* without any reference to a Manu; but then, seizing upon the current sayings of Manu, they appropriated and worked them in. This process may well have begun in the Sūtra period. Therefore it is that we find in the law-book itself so many verses that end with “thus said Manu:” if Manu said the whole, why emphasize these few? These in fact are those which kept their old form though incorporated. In the same way is explained another fact: namely, that some of the most modern verses in the metrical law-book claim to have been “said by Manu:” they were spurious, and tacked in later to support a doctrine unknown to the original work. Hence also such quotations in other law-books: doctrines unknown to or at variance with the Mānavan text are palmed off upon us as the utterance of Manu, and we are expected to be convinced by them. Among these are some which we are perfectly sure never could have been in the extant or in any other version of the Mānavan law-book. Among the metrical law-books of modern type, the number of untraceable quotations from Manu in no wise diminishes. Some discussion of them will be presented at another time.

It is not easy to realize without a detailed examination what an iota these professed quotations from Manu, verified and unverified, are among the mass of

verses in the Mahābhārata that correspond with our present Mānavan text. Most of these are without any quotation of authority: some are noted not as *smṛti* but as *ṛuti*; some, again, are attributed to entirely other law-givers. Nor should one fail to notice now large a storehouse of authorities is drawn upon by the epic, or suppose that the verses formally attributed to Manu suffice to show that his "law-book" was regarded as of paramount importance. The paper closes with a list and citations of the most prominent among the law-givers mentioned, especially in the twelfth book, in the Mahābhārata.

10. The Various Readings of the Sāma-Veda, by Prof. W. D. Whitney, of New Haven.

Prof. Whitney explained that he had recently had his attention drawn more closely to the *mantra*-material peculiar to the Sāma-Veda, by finding that this was not quite fully taken account of in the Petersburg lexicon, notwithstanding its very complete and thorough working-up in Benfey's special Glossary to the text: doubtless the general near accordance of the Sāma- with the Rig-Veda had induced a little neglect, which was also favored by the extremely troublesome method of citation (with five separate items) with which the text had been needlessly burdened by its editor. Examples of omitted words and forms are: *viçvatodāvan*, i. 437; *çuladā'*, i. 531; *dyukṣós*, i. 537; *çobhāthā*, ii. 355; *abhidā'ti* and *kṣidhī*, i. 336; *pratīpapratihē*, ii. 1059. He had been then led on to a detailed examination and estimate of that part of the Sāma-material which consists in its variations from the Rik-readings. In common with most students of the Veda (apparently), he had been wont to content himself with accepting the value of the Sāma-readings given originally by Benfey (in the Preface to his edition), and repeated (or arrived at independently) by Weber (in his History of Indian Literature): namely, that they are in general older and more original than the Rik-readings. This view has been recently assented to by Ludwig (in his Rig-Veda, vol. iii. p. 91), but after an exposition and discussion which to many will seem to conduct more naturally to a contrary conclusion; and it has been sharply controverted by Aufrecht (in his Preface to the second edition of his transliterated Rig-Veda). In this condition of things, it had seemed to the speaker as if a complete digest and orderly presentation of the Sāma-Veda variants would be a useful thing; such a one he had accordingly been engaged in drawing up, and he laid a part of his work (not yet reduced to final form) before the Society at this meeting.

The interest of an exhibition like this lies in part in the question as to the superiority of one of the texts to the other; but in a much higher degree in its bearing on the history of tradition of the Vedic hymns, and on the higher criticism of the texts transmitted to us. Each text having been handed down in a well-nigh perfect and unchanged form after its fixation at a certain period, the variants shown by the same verse in different texts become to us, as has been repeatedly pointed out, the equivalents of the various readings of the manuscripts of a classical text, for example; and their study becomes the best and the necessary preparation for the attempts, from which we cannot wholly refrain, at conjectural amendment of one and another text—even of that of the Rig-Veda itself. Just as the suggested re-ordering of the verses of Rig-Veda hymns, practised especially by Roth and his school, find their best warrant and justification in the differences of arrangement of the verses of the same hymn in different Vedic texts, so every suggested alteration of a Rig-Veda reading wins plausibility if similar variations can be shown among the Vedic versions of identical material. And the Sāma-Veda variants ought to be especially valuable for such a use, because of the close relationship of the two versions, and their at any rate only slight difference in point of antiquity and originality. The time has quite gone by at present when the existence of such a body of verses as the Sāma-Veda could be deemed explained by asserting it to have been "extracted from the Rig-Veda," and the existence of its few peculiar verses and its various readings, by declaring it to come "from a different and more comprehensive text of the Rig-Veda than the one now in our hands." We see now that the various collections must in the main have proceeded separately and independently out of one common body of traditional material, as truly as, for example, the varying versions of an English or Scotch ballad; and while we may confess the general superiority of one collec-

tion over another in point of readings, we can never be certain until after close examination which text in any given particular may give the best version. And, since all Hindu tradition on the subject is either wanting or worthless, all we can ever know as to the history of transmission of that ancient literature prior to the time of fixation of the several texts must come from their comparison.

Of the 1474 Rig-Veda verses found also in the Sāma-Veda (leaving a remnant of only 75, of which 21 occur also in other Vedic texts), over 850, or more than four sevenths, show identically the same form in both texts. But the proportion of these is quite different in the two parts of the Sāman. In the second Part (composed generally of little groups of verses, oftenest three in number, belonging together, and found together also in the Rig-Veda), the unvaried verses are not much less than three quarters (about 750 to 425); while in the first Part (made up of isolated verses) they are considerably less than half (about 240 to 300). This marked discordance can hardly be deemed accidental merely, especially as it is found to exist also between the two portions of part I.: namely, the verses found only in part I., and those (249 in number) which occur also in part II.: for of the latter a decided majority are unvaried, but of the former, less than a half. A similar relation is seen in the verses peculiar to the Sāman; they are considerably more than twice as numerous proportionally in part I. as in part II. In our present ignorance of the history of the minor collection, and of the relation of its two parts, these facts are not to be disregarded.

In presenting the body of variants in their detail, the method is followed of taking up first those of less consequence. Thus, the scheme begins with the differences simply in the order of single words and of *pādas*. Then come the phonetic differences (those in regard to a lengthened final vowel, the absorption of an initial *a*, the lingualization of a *s* or *n*, and so on); differences of accent follow; then differences of equivalent inflectional forms (as *madhos* and *madhvas* etc.), substitutions of one equivalent word for another without change of construction, substitutions of one form for another from the same verb- or noun-stem, exchanges of forms of different stems from the same root; then the more considerable variations of reading, and, last among these, the cases where it seems more or less probable that one reading has been unintelligently put in place of another which it resembled in sound. In the great majority of cases the variations are apparently indifferent as regards originality, the one being as primitive as the other; but where any thing different from this is to be noted, the advantage is so uniformly on the side of the Rig-Veda reading that the general opinion to the contrary expressed by Benfey and Weber appears to be without any sufficient foundation. Details must be omitted until the paper is published in full.

Prof. Francis Brown, of New York, gave a brief account of the International Congress of Orientalists at Leyden this year, at which he had been present, and suggested the possibility of some future congress being held in this country.

After passing a vote of thanks to the Faculty of the Divinity School for the use of their room at the present meeting, the Society adjourned, to meet again in Boston in May next.

Proceedings at Boston, May 7th, 1884.

THE Society met, as usual, in the Library of the American Academy, at ten o'clock. The meeting was called to order by the Vice-President, Dr. N. G. Clark, of Boston.

The minutes of last autumn's meeting were read and approved, and the order of business for the day was announced. The reports of the retiring officers were then presented.

The Treasurer's summary of accounts was referred to Messrs. Avery and Hall as a Committee of Audit, and found correct; it is as follows:

| RECEIPTS. | | | |
|-----------------------------------------|---|---|-------------------|
| Balance on hand, May 2d, 1883, | - | - | \$984.47 |
| Annual assessments paid in, | - | - | \$95.00 |
| Sale of the Journal, | - | - | 72.62 |
| Interest on deposit in Savings Bank, | - | - | 39.25 |
| Total receipts for the year, | - | - | 206.87 |
| | | | <u>\$1,191.34</u> |
| EXPENDITURES. | | | |
| Printing of Proceedings, | - | - | \$134.90 |
| Expenses of Library and Correspondence, | - | - | 18.50 |
| Total expenditures of the year, | - | - | \$153.40 |
| Balance on hand, May 7th, 1884, | - | - | 1,037.94 |
| | | | <u>\$1,191.34</u> |

The Bradley type-fund now amounts to \$955.53.

The Librarian reported the following additions to the Library: 50 whole volumes, 49 parts of volumes, 64 pamphlets, and one manuscript. The accessions were chiefly by exchange. The whole number of titles is now, of printed books, 4263, and of manuscripts, 141.

The Committee of Publication announced that the second half of volume xi. of the Journal was not yet in the printer's hands, but that there was a good prospect of completing it soon, by the issue of Professor Bloomfield's edition of the Kauçika Sūtra (which is now nearly ready for the press), or otherwise.

The Directors announced that, in response to an invitation from the Johns Hopkins University, they had appointed the autumn meeting to be held in Baltimore, and had made Messrs. Gilman and Bloomfield and the Corresponding Secretary a Committee of Arrangements. The date was to be Wednesday, October 29th, unless the Committee found reason to change it. They had reappointed the Committee of Publication of last year, substi-

tuting the name of Professor Toy for that of the late Dr. Abbot. The Committee now consists of Messrs. Salisbury, Toy, Van Name, Ward, and Whitney. The Directors proposed and recommended to the Society for election the following persons:

As Corporate Members—

Mr. Robert Arrowsmith, of New York ;
Gen. Henry B. Carrington, of Boston ;
Mr. Harry T. Peck, of New York ;
Mr. Herbert W. Smyth, of Williamstown, Mass. ;
Prof. John Phelps Taylor, of Andover, Mass.

The gentlemen thus proposed were elected without dissent.

The presiding officer appointed Messrs. Dickerman, Crane, and Lyon a committee to nominate officers for the ensuing year, and the following ticket, brought in and proposed by them, was elected without dissent:

President—Professor W. D. Whitney, Ph.D., LL.D., of New Haven.

Vice-Presidents—Rev. A. P. Peabody, D.D., of Cambridge; Professor E. E. Salisbury, LL.D., of New Haven; Rev. W. H. Ward, D.D., of New York.

Recording Secretary—Professor C. H. Toy, D.D., LL.D., of Cambridge.

Corresponding Secretary—Professor C. R. Lanman, Ph.D., of Cambridge.

Secretary of the Classical Section—Professor W. W. Goodwin, Ph.D., LL.D., of Cambridge.

Treasurer and Librarian—Mr. Addison Van Name, of New Haven.

Directors—Professor John Avery, of Brunswick, Maine; Professor Joseph H. Thayer, D.D., of Cambridge; Mr. A. I. Cotheal and Professor Charles Short, LL.D., of New York; Professor Isaac H. Hall, Ph.D., of Philadelphia; and President Daniel C. Gilman, LL.D., and Professor Maurice Bloomfield, Ph.D., of Baltimore.

The Corresponding Secretary (Prof. Whitney) read the names of the members who had died during the preceding year: namely, of the Corporate Members—

Prof. Ezra Abbot, of Cambridge ;
Prof. Arnold Guyot, of Princeton ;
Mr. Richard S. Fellowes, of New Haven ;
Prof. S. Wells Williams, of New Haven.

and of the Honorary Member—

Safvet Pasha, of Constantinople.

Prof. Whitney remarked upon the unusually severe losses of the Society during the past year, and upon the life and work of the gentlemen just named, especially in their relations to the Society. In particular, he spoke of the character and achievements of the late President, Prof. Williams. He recounted the services of Dr. Williams in the conduct of the diplomatic intercourse

between China and the United States, and his successful efforts to procure the insertion of the "toleration clause" in the Tientsin treaty of 1858, and spoke finally of the results of his persistent and well-directed literary activity. He also read a letter from Dr. D. B. McCartee, who spoke with deep feeling of his life-long intercourse and friendship with Dr. Williams, and of the latter's courage as a pioneer, his zeal in promoting the Christian religion, and his extraordinary productivity. Prof. Thayer paid a hearty and fitting tribute to the memory of his friend, Prof. Abbot, calling to mind his profound and varied learning, and the beauty and modesty of his character. He was followed by Prof. Hall, who spoke of Prof. Abbot's self-sacrificing devotion to his friends.

On motion, a Committee, consisting of Dr. Clark, Prof. Whitney, and Prof. Toy, was appointed to make some suitable expression of the feelings of the Society respecting its loss in the death of Messrs. Williams and Abbot. The following minutes were prepared by them and unanimously adopted:

The American Oriental Society desires to put on record its sense of the great loss sustained by the world of scholars and by this Society, in the death of its President, the Hon. Samuel Wells Williams, LL.D. He was a man of rare intellectual gifts, of singular industry, and of fidelity to all the trusts committed to him. He was of wide and varied learning, and without a superior in the knowledge of the country, the language, the literature, and the moral and religious systems of the Chinese. He was eminent for his services to his native land as Secretary of Legation of the United States in China, and for the aid which he rendered to commerce and to Christian missions by his executive labors, by his important contributions to periodical literature, and by his published works, especially *The Middle Kingdom*, *The Commercial Guide*, and *The Syllabic Dictionary of the Chinese Language*.

The Society desires in like manner to express its sense of the bereavement that it has suffered in the death of Ezra Abbot, D.D., LL.D., Professor of the Criticism and Interpretation of the New Testament in the Harvard Divinity School at Cambridge. He was for nearly thirty years the faithful Recording Secretary of the Society. As a student of the textual and historical criticism of the New Testament, he won for himself an enviable reputation for exact and broad scholarship, and made contributions of enduring value to the department of learning to which he was devoted.

A few of the facts respecting the lives of these two men may be mentioned here:

Samuel Wells Williams was born at Utica, New York, September 22nd, 1812. His father, a highly esteemed citizen of Utica, was a book-seller, and engaged also in the business of printing and binding. The son entered the Rensselaer Institute at Troy in 1831. The next year he was invited to go to China as a missionary printer of the American Board. He immediately accepted, but on condition that he be allowed a year to learn more thoroughly the printer's art, whose rudiments he had acquired as a school-boy. He sailed from New York, June 15th, 1833, reaching Canton in October. Here he was met by Dr. E. C. Bridgman, who had gone out in 1830, and had begun the publication of the *Chinese Repository* in 1832. Dr. Williams took charge of the printing-press which had been sent out from New York, and for more than twenty years he assisted in the publication of the *Repository*. In 1835, he went to Macao, and, working with his hands as a typesetter, he completed in seventeen months Medhurst's Dictionary. In 1837, he sailed to Japan to take home some shipwrecked mariners. He was not allowed to land them, and so, on returning, he learned from them their language, and made (1839-41) a translation into Japanese of Genesis and of Matthew's Gospel. In 1844, he returned to America. In 1853, when the American Government

attempted to open Japan, he accompanied Commodore Perry as interpreter. The next year he resumed his missionary work in China, and in 1855 was made Secretary and Interpreter to the American Legation. In 1857, he accompanied Minister Reed to Shanghai and Tientsin, where England, France, Russia, and the United States made treaties for mutual intercourse with China. To Dr. Williams is due the insertion of Article xxix., which provides for the toleration of the Christian religion. In 1859, he went to Peking, to aid in the ratification of the treaty of Tientsin. During 1860 and 1861, he was absent on leave at home for about a year. In 1862, Dr. Williams removed his family to Peking, and there he resided until October 25th, 1876, the forty-third anniversary of his arrival in China, when he bade farewell to the Flowery Land, the scene of his laborious and successful life. He established himself at New Haven, and was elected Professor of the Chinese language and literature in Yale College, in 1877. In 1881, he was made President of the American Bible Society and of the American Oriental Society. His last public duty was to preside at the meeting of the Oriental Society in October, 1883. His death occurred at New Haven, on the 16th of March, 1884.

To the twenty volumes of the *Chinese Repository* Dr. Williams contributed about 140 articles. These included twenty articles upon subjects connected with the Chinese government and people, sixteen relating to the natural history, and ten to the arts, sciences, and manufactures of China. The *Journal and Proceedings* of the American Oriental Society, the *Journal* of the North China Branch of the Royal Asiatic Society, and the volumes of the *United States Diplomatic Correspondence relating to China* contain many learned and important papers from his hand. His *Easy Lessons* (in the Canton Dialect), appearing in 1842, his *English and Chinese Vocabulary of the Court Dialect* (1844), his *Tonic Dictionary of the Canton Dialect* (1856 and 1876), and his three volumes of the *Anglo-Chinese Calendar*, were of inestimable value to students of the spoken dialects at a time when helps were few. His *Syllabic Dictionary of the Chinese Language* (1874) contains 12,527 characters, with the pronunciation as heard at Peking, Shanghai, Amoy, and Canton. In 1844 appeared *The Chinese Commercial Guide*, and this most useful work reached a fifth edition in 1863. The work by which Dr. Williams is best known to the general public is *The Middle Kingdom*, which first appeared in 1848; and it was with feelings of devout thankfulness that he alluded to the completion of the beautiful new edition of this work toward the close of his serene and happy life at New Haven.

Dr. Abbot was born in 1819 at Jackson, Maine, and, after studying at Phillips Exeter Academy, entered Bowdoin College, and graduated in 1840. After teaching several years in Maine, he went to Cambridge in 1847, taught there in the High School in 1852, was appointed Assistant Librarian of Harvard College in 1856, and Bussey Professor of New Testament Criticism and Interpretation in the Harvard Divinity School in 1872, which last position he held till his death. His first publication was a catalogue of the Cambridge High School Library. In 1869 appeared his *Literature of the Doctrine of a Future Life*. The American edition of Smith's *Dictionary of the Bible* is greatly enriched by valuable bibliographical contributions from Dr. Abbot. As an example of the minuteness and breadth of his exegetical study may be cited his article on Romans ix. 5, in the *Journal* of the Society of Biblical Literature and Exegesis. On textual criticism, the subject to which he devoted most of his time, he has unfortunately published comparatively little in his own name. To Dr. F. H. A. Scrivener he sent a long and important list of corrections to his *Plain Introduction to the Criticism of the New Testament*. As member of the American Committee of Revision of the New Testament, he had opportunity to make a worthy use of his text-critical learning; but, beyond such results as may exist in the revised translation and a few newspaper articles, he has left no record of his researches. The first volume of the Prolegomena to Tischendorf's eighth edition of the Greek New Testament contains textual and grammatical contributions by Dr. Abbot, prepared with minute accuracy and careful discrimination. His only historical-critical work is *The Authorship of the Fourth Gospel* (1880), an examination of the external evidence in the case, a work remarkable for scholarly precision and close reasoning. An account of his printed works gives no idea of his unceasing activity, and only his pupils and friends know the inspiration given by the high character of his scholarship, and the purity, faithfulness, and self-sacrificing devotion of his daily life.

The *Missionary Herald* for April, 1884, contains a notice of the life of Dr. Williams by Pres. Porter, and the *Bible Society Record* for March 20th has another, by Mr. E. W. Gilman. Professor Thayer's commemorative notice of Dr. Abbot appeared in the *Independent* for March 27th and Apr. 3rd, 1884 (reprinted in the *Christian Register* for Apr. 3rd), and another notice, from which the above is excerpted, appeared in the *Nation* of March 27th.

The Corresponding Secretary further gave some account of the life and labors of the distinguished scientist, Prof. Guyot, during many years an interested, though for the most part not an active, member of the Society; and of Mr. Fellowes, an eminent citizen of New Haven, whose liberal hand and efficient helpfulness in every good work make his loss keenly felt there. He also stated what particulars were known to him of the enlightened and scholarly Turkish gentleman, who, elected at the instance of our late member, Hon. J. P. Brown, had since 1850 graced our List of Members with his name. Safvet Pasha was at one time Grand Vizier of the Ottoman Empire. His death occurred on the 17th of Nov. 1883.

The correspondence of the half-year was presented, and some parts of it were read.

The following communications were presented at the meeting:

1. On a Cippus from Tarsus, bearing a Greek Inscription with the name of Paul, by Prof. Isaac H. Hall, of Philadelphia.

In the late spring of 1877, the U. S. ship "Alliance" brought down from Mersine, the port of Tarsus, a round marble cippus from the site of the latter city; which was given by the American consul (or vice-consul) there to the Hon. John T. Edgar, then U. S. Consul at Beirut. Mr. Edgar gave it to the museum of the Union Theological Seminary in New York city, through the Rev. Dr. Philip Schaff, who was then returning from his tour in the East. The stone is now in the Seminary Museum in New York, labeled: "Inscription from Tarsus, with the name of Paul." This label is true enough, but the inscription has no reference to the great apostle who was once Saul of Tarsus.

The inscription is in uncial letters, rather late, plainly and deeply cut, and reads as follows:

ΤΟΠΟΣ ΠΑΥΛΟΥ
ΜΑΓΙΡΟΥΤΟΥΕΠΙΣ-
ΚΟΠΙΟΥΚΑΙΒΟ-
ΑΣΙΑΟΥΤΟCΤΗC
ΑΤΟΥΤΑΜΕΤΗC

Or, Τόπος Παύλου
Μαγίρου τοῦ Ἐπισ-
κοπίου καὶ Βο-
ασιαούτος τῆς
α[ὐ]τοῦ γαμετῆς.

Or, in English, "Tomb of Paulus Magirus the [son] of Episcopius, and of Boasious his wife."

The chief interest in this inscription lies in the feminine proper name, which shows that in certain Cilician inscriptions in C. I. G., where the editor has ventured corrections, the stone is probably right and the editor wrong.

Examples of the genitive feminine ending in -ουτος (nominative probably—sometimes certainly—-ους) are to be seen in C. I. G. 4822 (μητρος Φιλουτος), 4826 (μητρος Σαρανουτος, where the editor has corrected the η to π), 4927 (Πετροουτος μητρος, where the editor has corrected the second ε to σ), 4403 and 4404 (where the editor has ventured similar corrections).

If this Tarsus inscription were treated in the same way, we should probably change the Βοασιαουτος to Βοασισουτος or -πουτος; but the better opinion would be that the stone-cutter was right in all the instances.

2. On a Shapira Roll in Philadelphia, by Prof. I. H. Hall.

In the Ridgway Branch of the Philadelphia Library is deposited a leather roll, composed of pieces of Synagogue-rolls of different hands and ages, each full-sized

piece containing regularly five columns, and each column regularly fifty-one lines. The pieces are stitched together with linen or cotton thread. The leather is sheepskin, most of it stained red. It much resembles the Karaite rolls. The columns number forty-seven, and the contents of the roll are the entire book of Numbers—no more, no less. Spaces mark the common Hebrew sections; but there are no verse divisions. The age of none of the pieces seems to be very great; but in this respect I have not examined it closely.

The roll was bought from Shapira in Jerusalem, a number of years ago, by a well-known citizen of Philadelphia, on the strength of Shapira's statements, and of a letter of the late Professor Tischendorf, which accompanies the MS. The letter reads as follows:

"Die mir von Herrn Alt aus Frankfurt a. M. vorgelegten althebräischen Handschriften auf Leder, Eigenthum des Herrn M. W. Shapira zu Jerusalem, haben eine offenbare Aehnlichkeit mit denjenigen Pentateuchrollen die vor 10 Jahren durch den Karaiten Fingowitsch nach Petersburg gebracht und von der königlichen Regierung als Bestandtheile einer grössern mehrere Hunderte von MSS. umfassenden Sammlung angekauft worden sind. Ich zweifle nicht dass das Alter dieser Rollen über mehr als tausend Jahre zurückreicht. Sie würden daher ohne Zweifel jeder grössern Bibliothek zu besonderer Zierde gereichen.

Geh. Rath Dr. von Tischendorf."

Leipzig, Sept., 1870.

For various reasons I suspected that the letter was a forgery, and I had phototypes prepared, which I sent to sundry people in Germany who I thought would be able to determine the question of its genuineness. These phototypes stirred up a number of queries there, of which the most burning one was whether the MS. was the late batch of fragments which Shupira tried in vain to sell in Germany and England. (But the MS. has been in Philadelphia for twelve years.) Von Gebhardt, of Göttingen, was the first to suggest that the letter was probably sold with another roll than the ones for which it was written, and he thought the letter genuine. Dr. C. R. Gregory thought it genuine, and showed it to Tischendorf's widow, who pronounced it genuine. At length von Gebhardt sent it to Professor Franz Delitzsch, who pronounced the letter genuine, and knew all about the rolls for which it was written. These were two rolls left with Joh. Alt, of Frankfurt a. M., by Shapira for sale, and were described by Delitzsch in the (Augsburg) *Allgemeine Zeitung* for 16 February, 1870; one being a roll from San'a in South Arabia, much resembling this, but written with *four* columns regularly to a section of the leather, and containing between two copies of a repeated portion of Leviticus, a note to the effect that Abu Ali Sald had caused the MS. to be written and presented for the improvement of his soul's health, in A.D. 1058. The other roll was from Hebron, and on parchment.

We need not dwell on the fact that, though Tischendorf was a prince among Greek palæographers, he had no reputation as a judge of Hebrew MSS.; and it is plain that he neglected or overlooked the date, which would have showed that his opinion put the age of the MSS. two centuries too far back.

But it is plain that the letter was not written with any reference to this Philadelphia MS., and that its connection therewith is a fraud. The roll is a curiosity worth keeping; but no such treasure as the two rolls for which the letter was written.

3. On the Stanza, Rigveda x. 18. 14, as illustrating the Varieties of cumulative Evidence that may be used in the Criticism of the Veda, by Prof. C. R. Lanman, of Cambridge.

The eighteenth hymn of the tenth book of the Rigveda is one of a collection of five funeral hymns, and is the best and most important of them. Except the last or fourteenth stanza, the hymn is clear and intelligible throughout. It has been translated and explained by Prof. Whitney in his *Oriental and Linguistic Studies*, i. 50. There is no question of importance respecting the integrity of the text of the first thirteen stanzas. They contain an appeal to death to depart far away; then follow stanzas to be said in connection with ceremonies typifying the separation of the living from the dead; then other stanzas which accompanied the commitment of the body to the ground; and finally, in the thirteenth stanza, a prayer

that the kindly spirits that hover about may not let the earth press hard on the departed, and that Yama may provide for him a dwelling in the other world. Then come the words:

praticī'ne mā'm āhanī'vāh parṇām ivā' dadhuḥ |
prati'cim jagrabha vā'cam ācvaṁ raṣanāyā yathā ||

The stanza is translated by Geldner and Kaegi thus: 'On a future day they will take me, as a plume from the arrow. I hold thy voice back, as a steed with a rein.' The words are put in the mouth of a sorcerer who is conjuring a sick man nigh to death. The sense would then be: To be sure, the day is coming when I must die, when they will take me as they do the plume from the worn-out and useless shaft, in order to throw away the shaft like as they will my corpse. But although my day will come, I nevertheless hold your voice or breath of life back in your body by my magic power. [With this interpretation the comparison halts badly. Rather, they will take me as they do the torn and useless plume from the still useful shaft, in order to throw away the plume, for *parṇam*, not *ivāh*, is compared with *mām*.]

The above rendering is open to several objections. The first half of the stanza is not an apposite antithesis to the last. The rendering of the perfect, *a dadhuḥ*, as future is inadmissible. The words *praticina* and *praticī* ought to have essentially the same meaning. The word *vāc* is hardly equivalent to *ātman* or *manas* (RV. x. 60. 8), and if it did mean 'thy voice, i. e. breath of life,' there ought to be a *lava* or *te*. The interpretations of Grassmann and Ludwig are not convincing.

On these accounts, the rendering of Whitney, although tentative, is perhaps to be preferred:

They've set me in a fitting day
 As one the plume sets on the shaft,
 I've caught and used the fitting word
 As one a steed tames with the rein.

This then would have to be taken as an expression, on the part of the author of the hymn, of self-complacency, of a consciousness that he had made a good hymn at the right time and place, and with as good skill as a skillful horseman, for no skill was more prized than his.

The Rīgveda consists of a large amount of material which was for a long time handed down by memory and word of mouth. During this period of memorial tradition, it was natural that parts of hymns should be forgotten, and that even all but a single stanza or two of what was once a complete hymn should be forgotten. In this way it came to pass that, along with the hundreds of complete hymns, there were in the mass of remembered material also scores of isolated stanzas. Now when this material was reduced to written form, the complete hymns were arranged in the main according to certain simple principles (which concerned their authorship, the divinity invoked, and the length: see Delbrück, *Jenaer Literaturzeitung*, 1875. no. 49), but there was palpable difficulty with regard to these isolated fragments. Where should these be put? Often such a fragment contained some word or name or allusion which linked it to a certain stanza of some complete hymn, and was accordingly inserted after that stanza in the hymn. In this way have occurred many interpolations whose cause is easy to discern. But oftener still, these isolated stanzas were like dogs without a master, claimed for no author, and having no belongings. In these cases they received a place in the written collection at the end of complete hymns. It has often been remarked, by Roth and others, that the favorite place for isolated, spurious, and modern stanzas is at the end of hymns or books. This point is well illustrated by the first of the *khāṇḍikāni śāktāni*, the supplementary hymns or later additions, as given by Aufrecht, vol. ii. 672: it follows hymn 50 of the first book, the last of Praskāva's hymns. This hymn consists of nine stanzas in three strophes of undoubted integrity. At the end of these strophes, or the hymn proper, come four stanzas, relegated by their metre and sense to the limbo of doubtful canonicity, but still passing in the MSS. as genuine. And then finally, in the supplement, comes the *khāṇḍikum*, or 'later addition,' whose posteriority and spuriousness was admitted even by the Hindus. Other things being equal, therefore, a stanza which occurs at the end of a hymn and does not stand in any easy connection with the rest of it, may be more safely regarded as an isolated, spurious, or modern stanza than if it occurred in some other position.

Even with Prof. Whitney's rendering, the stanza in question is, *eo ipso*, a later addition. But it is interesting, and perhaps useful, to point out a rather remarkable number of concurrent items of evidence for the lateness of the stanzas.

1. It is at the end and out of connection with the rest of the hymn.
2. Its metre is of a different kind from that of the body of the hymn.
3. The metre is not a good Vedic specimen of its own kind; it has, e. g., a trochee in the cadence of the third *pāda*.
4. The genitive-ablative form *iśvās* is not good Vedic. This allows only *iśas*. Examples of singular forms in *āi*, *ās*, or *ām*, in connection with *u*-stems, number only three for the whole Rigveda, viz., *iśvāi*, vi. 75. 15, and *suvāstvās*, viii. 19. 37, both stanzas of late date, and *iśvas* here.
5. For the Rigveda the rule holds that oxytone stems in *āc* throw the accent forward to the case-ending in the weak cases and to the feminine *i* when the vowel of *āc* is absorbed in the *i* or *u* of the preposition. A genuine old Rik-verse would have *praticī'm*, but our text has *prati'ctm*. Compare RV. iii. 30. 6, *jahī praticō anācās*, with its A.V. variant, iii. 1. 4, *jahī prati'co anā'cas*.
6. All the stanzas (1-13) are prescribed by Aṇṇalāyana in the Grihyasūtra, iv. 2.18-6.12, to be used at the burial service excepting this one. The application of this criterion to Vedic texts offers an inviting and fruitful field of study. See Hillebrandt, *Spuren einer älteren Rigvedarecension*, Bezzenberger's *Beiträge*, viii. 195 ff.
7. This stanza is passed over by the commentator Śāyana in silence and without a word of explanation, as if it were something uncanny. This is a thing that he seldom does. Similarly the *pada-kāra* passes by certain stanzas, e. g. vii. 54. 12, x. 121. 10, and all of x. 190, without giving the divisions into words.

4. On the dialectic Equivalence of *sh* and *n* in Proto-Babylonian, by Carl F. Lehmann, of Hamburg.

There are two cases in which the equivalence of *sh* and *n* in Proto-Babylonian seems to be certain:

1. Sumerian *sher* = Akkadian *ner* (Assyrian *sharru*), 'leader, king.' Cf. also Sum. *sher-mal* with Akk. *ner-gal* 'king, ruler,' lit. 'being leader.'
2. Sum. *a-shera* = Akk. *a-nera*, 'to lament'; this is probably a compound of *a*, 'water,' and *she-ir*, 'to lament, sigh.'

The form *mun-gi-esh-a-an* was supposed to furnish a third case of this equivalence (Sum. *gesh* = Akk. *gen*), but has been differently explained by Hommel, *Die Semitischen Völker und Sprachen* (S. V. u. S.), p. 511.

The equivalence in question was first pointed out by Professor Haupt; compare especially *Der keilinschriftliche Sintfluthbericht*, p. 25, note 16, where also the passages are quoted. It has thus far found no explanation, and Hommel, in accord with Schrader, recently expressed serious doubts as to whether these words were not after all merely chance homonyms. Compare S. V. u. S., p. 289 and p. 471, note 158, with the additions to this note, p. 510.*

As a contribution to the explanation of these facts as a real equivalence, Dr. Lehmann offered the following suggestions.

Traces of rhotacism appear in Sumerio-Akkadian, e. g. in *shesh* = *sher*, 'to sigh,' in *e-esh* = *e-ir* (Ass. *bakā*), 'to weep,' and in *tush* = *dur* (Ass. *ushābu*), 'to sit'; see Haupt, *Keilschrifttexte*, i. p. 36, no's 865-6, p. 34, no. 803, and iv. p. 183, line 7 of vocabulary.

Now if *r* is assumed as the intermediate stage between *sh* and *n*, the only remaining difficulty is to explain the transition from *r* to *n*.

In the first place, there is no physiological difficulty in the formation of a nasal *r*; this has been shown by Sievers in his *Phonetik*, p. 90.

Secondly, in the Semitic languages, especially in Aramaic, the assumption of a peculiarly near relation between the liquids *ʔ*, *r*, and *l*, *n*, seems necessary, and this relation may very well point to a nasal coloring of the *ʔ*, *r*. Thus the *ʔ*, *r*, of

* Hommel repeats these doubts, adds some new examples, and suggests an explanation of the phenomenon in general, in the *Zeitschrift für Keilschriftforschung*, i. 170-1, and note 2. This passage is in the part for April, 1884, which was not received here until May 22, i. e. after this paper had been read.

the Aramaic form of the numeral 'two,' *תרין*, *terén*, answers to a *ן*, *n*, in the other Semitic tongues; compare. e. g., Hebrew *שנים*, *shānaim*. So also the Aramaic word for 'son' is *בן*, *br*, in the singular, but shows in its plural forms *בנים*, *bné*, the *ן*, *n*, which is common to all the Semitic languages; compare Hebrew *בן*, *ben*. On the other hand, Aramaic *ן*, *n*, corresponds to *ר*, *r*, of other Semitic languages, in *רָחַק*, *rahk*, = Hebrew *רָחַק*, *rahk*, 'to rise,' of the sun, compare Arabic *arh*. For a further discussion of this question, see Philippi, *Zeitschrift der deutschen morgenländischen Gesell.*, xxxii. 32-9, especially 34 and 38, and the authorities there cited, and also de Lagarde, *Gesammelte Abhandlungen*, p. 51, line 27.

Thirdly, in Indo-European, we find, for example, in Prakrit, the form *damisana* corresponding to the Sanskrit *darśana* (pointed out by Bloomfield), and in Lithuanian *Mangarytė* for *Margarytė* (Brugmann). It may also be mentioned that in the syllable of reduplication of the Sanskrit intensives the final consonant is almost invariably either *r* or *n*; see Whitney, *Grammar*, § 1002 b, and cf. c. Compare also the relation of the stems *āhas*, *āhar*, *āhan*, *ā'dhas*, *ā'dhar*, *ā'dhan*, *Journal Am. Orient. Soc'y*, x. 523.

Fourthly, examples of the correspondence of *r* and *n* may be found even in Proto-Babylonian. Thus 'plantation' or 'garden' is expressed by *gan* as well as *kar*, and both forms appear in Assyrian as *ginū* and *kirū* respectively. Again, the name of the Old Testament city *Erech* was pronounced by the Assyrians as *Uruk*. In Akkadian the name is usually written ideographically, and on this account we cannot trace variations in the Proto-Babylonian pronunciation of the word. In one instance, to be sure, the name appears in phonetic writing as *u-nu-ug*, i. e. *Unug*, and Friedrich Delitzsch, *Paradies*, p. 221, no. 32, explains the Assyrian form as a "hardening" from *Unug*: but it seems more probable that in parts of ancient Babylonia the pronunciation was really *Urug*, and that from this the Assyrian form is derived. See Haupt, *Keilschrifttexte*, i. p. 19, no's 330-1, and compare especially 334.

In view of these considerations, the assumption that a nasal *r* is the intermediate stage between *sh* and *n* seems probable.

The two words discussed here, *sher* and *a-shera* (properly *a-sheer*), show the correspondence of *sh* and *n* in a syllable which ends in *r*: and on this account it may be that the intermediate form with *r* does not appear.

The difficult question of the relative age of the two dialects, Sumerian and Akkadian, need not here be discussed. But if, with Hommel and Delitzsch, we consider the *eme-shal* dialect (here called Sumerian) to be the younger, and the form with *n* accordingly to be the original one, the main part of our theory is not thereby invalidated. *N* would then have become a *r* with combined nasal element (cf. the Aramaic example cited above); but for the change from *r* to *sh* it would perhaps be difficult to find analogies.

5. On the Dātavya Bhārata Kāryālaya in Calcutta, by Prof. Lauman.

The meeting of the American Oriental Society is a fit occasion to notice the remarkable undertaking of a successful business man of Bengal, Protap Chundra Roy. From his youth he had cherished the idea of checking the progress of irreligion, as he says, by diffusing among his countrymen a knowledge of the classics of India. Accordingly, after retiring from business and recovering in a measure from a severe domestic affliction, he organized the Dātavya Bhārata Kāryālaya, an institution bearing some general likeness to the American Tract Society. The Kāryālaya relies on the public-spirited and wealthy men of India for its pecuniary support, and devotes itself to the printing and gratuitous distribution of the great works of Sanskrit literature. Roy began with the free distribution of one thousand copies of the Mahā-bhārata in Bengali translation. This was followed by two other editions of about three thousand copies each of the same translation. A fourth edition of the Mahā-bhārata, containing the original Sanskrit text and Bengali translation is now in progress, and a similar diglot edition of the Rāmāyana is nearly completed. All of these works are extensive, and the number of printed forms already gratuitously distributed or in course of distribution mounts up to the astonishing figure of 13,783,500.

At present Mr. Roy is engaged upon the publication and free distribution of an English translation of the *Mahā-bhārata*. The edition will consist of twelve hundred and fifty copies, and of these two hundred and fifty copies are designed for the scholars of Europe and America. Sanskrit students, therefore, who wish to obtain the work, may send their addresses to Mr. Roy, at No. 367 Upper Chit-pore Road, Calcutta, British India.

The translation is doubtless the work of some Hindu scholar, but his name is not mentioned. It is in the main smooth and correct; but there is great lack of accuracy in the rendering of the proper names; and the Sanskrit technical terms of sacrifices, for example, are often spelled out in Roman letters without the least consistency. It is greatly to be hoped that in the forthcoming parts these serious blemishes will be remedied. In like manner, we cannot too earnestly express the wish that Mr. Roy will cause the numbering of the book, chapter, and verse to be given on the outside ends of the head-lines in place of the page-numbers of his translation. These last are of small importance and can be put at the inside. The number of every tenth *śloka* should also be given in square brackets and clear figures at the end of every tenth *śloka* in translation. This will add greatly to the usefulness of the work for scholars, although perhaps not for cursory readers. Of immense advantage, further, would be the addition of a synopsis or table of contents of the whole poem when the end has been reached. I venture to say that this would contribute more to help on and facilitate the study of the *Mahā-bhārata* among foreign students than any other one thing that Mr. Roy could do. It is true, the second chapter of the first book (Calcutta ed. i. 360-660 = Bombay ed. vol. i. folios 19-28) contains a very brief synopsis of the contents; this is useful as far as it goes, and its usefulness is recognized by the Hindus in the following words:

*ākhyānam tad idam anuttamam mahārtham
vijāyam mahad iha parvasamgrahena |
grutvādau bhavati nṛṇāṃ sukhāragāham
vistṛṇām lavaṇajalam yathā plavena ||* i. 659.

'As the vast ocean becomes easy to get over for men with a boat, so this great history, incomparable and of great import, is to be understood in this world by means of the table of contents, if one will first listen to that.'

But neither this bald enumeration of subjects in the *parvasamgraha*, nor the short analysis of Williams in his *Indian Epic Poetry* (now out of print), is in any way sufficient or convenient. What we need is a full analysis of the main thread of the *Bhārata*, of that which may provisionally be supposed to be the more or less original nucleus of the work. The episodes, as, for instance, the *Bhagavad-gītā*, or the *Nala*, might be given only in the briefest analysis. Double references, to the Calcutta and the Bombay editions, might be given throughout, and every typographical device should be brought into service to make the work easy for use.

Such a change of plan, however, may seem impracticable to the publisher; moreover, the mechanical production of neatly and conveniently printed books is doubtless attended with far greater difficulty in India than in Europe. Accordingly, we cannot refrain from making publicly the suggestion to Dr. Adolf Holtzmann, of Freiburg, that he should undertake the publication of this analytical summary. There can be no doubt that such a work would be exceedingly welcome to those who desire to make small excursions into these fields, and it would no less certainly exercise a powerful influence in stimulating Sanskrit scholars to grapple with questions of higher criticism concerning the *Mahā-bhārata*. The dramas, the law-books, and the Vedic literature, all have had their turn in engrossing the attention of scholars. Is it not time that the Epos should be made the subject of critical investigation?

To Mr. Roy and his undertaking we wish all success. And, in view of what he has already accomplished, we believe that he will carry it out to the end. If he does not conclude to modify slightly the plan, so as to make his book more useful to scholars, we shall at least console ourselves with the thought that all legitimate efforts towards widening the circle of those interested in Indian literature (like the series of *Eastern Classics for Western Readers* to be edited by Professor Peterson, of Bombay, and like these publications of Roy), cannot fail to have an indirect influence on the progress of Indian studies; for from the increas-

ing numbers who pursue them there will arise a number absolutely if not proportionally increased of those whose interest will bear fruit in important contributions to our knowledge of Indian antiquities.

6. On the Unaugmented Verb-Forms in the Rig- and Atharva-Vedas, by Prof. John Avery, of Brunswick, Me.

The most ancient form of Sanskrit speech, like the earliest dialect of Greek, often omitted the augment in the preterit tenses of the verb. Superficial observation shows that this usage is most common in the Rig-Veda; is less so in the Atharva-Veda; is rare in the Brāhmaṇas; and has disappeared from the later language, except in aorist occurrences after the negative *mā'*, and in other sporadic instances. It appears, moreover, that these abbreviated forms in part yield precisely the same sense as the longer ones; and in part have, in some way, acquired a subjunctive or imperative meaning.

Since it is essential to a correct interpretation of the Vedic texts that we should know how to understand these forms, the present investigation has been begun with this view: to bring together all occurrences of unaugmented verb-forms in the two texts above mentioned; to note their relative frequency in the different tenses of the verb-system; to inquire whether they accord in sense with the distinctions commonly received as characteristic of the tenses in the Veda; and, finally, to determine how large a proportion have retained a preterit sense, and how many are employed like true subjunctives or imperatives. To this end the text of the Rig-Veda has been searched through, and the result corrected by Grassmann's Dictionary; and for the Atharvan the occurrences have been excerpted from Prof. Whitney's *Index Verborum*.

It needs to be premised that in a work like this a precise result cannot be attained in every instance. For, in the first place, the ancient system of verb-inflection did not always make a formal distinction between unaugmented preterits and true subjunctives or imperatives: e. g. *riṇā's* may contain the modal *a* or be simply shortened from *árinās*, and so *dāt* is to be compared with the subjunctive *dā'ti* and the preterit *ádāt*; the unaugmented *a*-aorist is not always clearly distinguishable from the subjunctive of the root-aorist, especially when the accent is wanting; and even when that is supplied it may mislead—as *sánat* beside *sanéma*; the so-called pluperfect, having lost its augment, does not differ, in most instances, from a perfect subjunctive with secondary endings; so, too, the imperative in certain persons is like unaugmented preterits of the same persons, and here even the accent sometimes fails to make the needed distinction. In the second place, a doubt may arise whether a given form belongs to the "root" or "accented *a*" class of the present-system, or to one or other of the two stems of the simple aorist. We are accustomed to class short forms like *ákar* with the aorist, and forms like *ákṛnot* with the imperfect; yet it is theoretically not improbable that in the earliest literature, whatever may be the usage later, this distinction had not become everywhere recognized, and that while, for example, *ákṛnot* was coming to represent the imperfect tense—or indefinite past—the earlier *ákar* had not wholly retired from that office and assumed the role of an aorist. This may explain the fact, often occurring among unaugmented forms, that an imperfect sense may at times best render a so-called aorist form. But, after eliminating all the doubtful cases referred to above, the great majority of unaugmented forms are found to have a recognizable character, and may be classified as follows.

The occurrences of augmented verbs in the Rig-Veda amount to 3309—of which 2065 belong to the present-system, and 1194 to the aorist—while the augment is wanting in about 1945 instances, or in a ratio to the complete forms of nearly 1 to 1.69. Of the 1945 unaugmented forms, about 45.2 per cent. belong to the present-system; 1.2 per cent., rather more doubtfully, to the perfect-system; and 53.6 per cent. to the aorist. Of the last, a little more than 74 per cent. are claimed by the simple aorist.

Augmented forms are more frequent in the present-system than in the aorist, in the ratio of about 1.73 to 1, while unaugmented forms are more numerous in the aorist, in the ratio of 1.21 to 1.

A complete separation of the unaugmented forms into those which have an indicative, and those which have a subjunctive or imperative sense, cannot be made

with entire certainty; and in the following summary a small margin must be left for doubtful cases. Of the 1945 instances, 47.7 per cent. are reckoned as indicative, and 52.3 as subjunctive in meaning. In the present-system the indicative use appears to exceed the subjunctive in the ratio 1.3 to 1, while in the aorist the latter exceeds the former in the ratio of 3 to 2. Of the 626 occurrences of the improper subjunctive in the aorist, the simple aorist claims 454 (about equally divided between its two stems), the reduplicated aorist 71, and the sibilant aorist 101 (rather more than half being counted with the *is*-stem).

Turning, now, to the Atharva-Veda, we find a very different usage. The occurrences of unaugmented forms in this text amount to 383, of which 61 are reproduced from the Rik—and so, as stereotyped expressions handed down from a former age, do not fairly represent the usage when the later hymns were composed. The occurrences belonging to the present-system are 94, against 289 counted with the aorist. Of the former, nearly one-fourth are taken from the Rik. Dividing the passages into those having an indicative, and those having a subjunctive sense, we observe a marked difference between the two texts. Only 27 instances are reckoned with the indicative, but 356 with the subjunctive or imperative. While in the Rik the improper subjunctive occurs in about 52 per cent. of all occurrences, in the Atharvan it appears in not less than 93 per cent. of them. About three-fourths of the forms yielding a subjunctive sense are in the aorist, of which the simple aorist claims the lion's share—showing 185 occurrences, against 17 for the reduplicating stem, and 77 for all the sibilant stems. It is further to be observed that in a majority of occurrences (244 out of 356, of which 213 are in the aorist) of the improper subjunctive in this Veda it is in connection with the negative *mā'*.

The foregoing introductory remarks and compendious statements are made pending a more searching investigation of the subject, when it will be set forth in greater detail and with ample illustration.

7. The Study of Sanskrit and the Study of the Hindu Grammarians, by Prof. W. D. Whitney, of New Haven.

Professor Whitney began with a brief characterization of the Hindu native science of Sanskrit grammar, and a notice of the essential aid it had rendered to European students of the language. Its general character, as in other such cases, was determined by the character of the language with which it dealt. The Sanskrit is above all things an analyzable tongue, of transparent structure, falling easily apart into roots and suffixes and endings. In its perfected form, then, as represented to all after time by Pāṇini, the native grammar is an established body of roots, with rules for their extension to stems and the inflection of the latter, and for the accompanying phonetic modifications, this last involving a phonetic science of very high character; the syntax is much inferior, though perhaps only in proportion as the Sanskrit sentence is inferior to the classical. But its form of presentation is strange, consulting brevity at the expense of every other quality; and hence it is very difficult of acquisition; one must be master of the whole system, in all its details, before he can be certain with regard to any one point that there does not lurk in some remote chapter a rule bearing upon it: it is something like having to construct passages in a text out of an *index verborum* to that text—and one, too, not alphabetically arranged. Theoretically, all that is prescribed or allowed by Pāṇini's rules, taken together with the list of roots accepted by him, and other like supplements, is Sanskrit; and nothing else is entitled to that name. The young pandit learns the system, and governs his Sanskrit speech and composition by it. The first European students did the same, to their great advantage; and one must, of course, still follow a like method, if he is to communicate with pandits, and to gain their respect and aid. But the question is whether Western scholars in general are bound to this course: in short, whether we are to study Pāṇini for the sake of learning Sanskrit.

It is to be noticed, in the first place, that the native grammar can never have been the means, but only the regulator, of the tradition of the learned language. No one ever mastered a list of roots and a grammar, and then went to work to construct texts upon that basis. The learner, rather, has his models which he imitates; he makes his speech after that of his teacher, only under the constant

check of having to quote the grammar in regard to any questioned point. All this is like the ordinary transmission of a cultivated language, merely with a difference of degree. That such was actually the case with Sanskrit, is made plain enough by the facts. There is no absolute coincidence between Pāṇini and the classical language. The latter, indeed, includes little that Pāṇini forbids; but it also lacks a great deal that he allows. The difference is so great that Benfey, who was deeply versed in the Hindu science, calls it a grammar without a corresponding language, as he calls the pre-classical dialects a language without a grammar. What is then this grammarians' dialect, standing between the classical and the pre-classical, and unlike them both? and what claim has it to our study?

We have, in the second place, an immense literature in that older pre-classical language, which was produced in entire independence of the grammarians, and is only very imperfectly treated by them. It is in two or three dialects, of different degrees of antiquity, standing in a perfectly natural order of succession to one another. And the classical language stands in a natural succession to them. This historical affiliation casts the most important light on the classical language, which only by its help is properly understood.

The main thing which makes of the grammarians' Sanskrit a special and peculiar tongue is its list of roots. There are about two thousand such; but a full half of them have never been met with in use, earlier or later. Some small number of these, doubtless, do not happen to occur, and may in part yet turn up; others are assumed for the sake of explaining derivatives; others are the offspring of confusion and original false readings; but a very large number are as yet unexplained and problematical remainder, and even in no small measure obviously artificial and false (see Dr. Edgren's discussion of them, in Vol. xi. of the Society's Journal). It is well known what mischief this list of roots wrought, in the hands of the earlier incautious and credulous students of Sanskrit, and how many false and worthless etymologies were founded upon them. That work is even yet, perhaps, not entirely over; still, it has come to be generally understood that no alleged Sanskrit root can be accepted as real unless it is supported by a kind of use in the language that authenticates it (for, in late writings, verb-forms are now and then made artificially, on a root taken by a grammarian's license out of the list of roots): that is to say, that a Hindu grammarian's statement as to the fundamental elements of his speech is without authority until tested by the actual facts of linguistic use, as represented by the Sanskrit literature.

But the principle thus won is of universal application; for we have no reason to expect more trustworthiness in other departments of the grammar; there is nothing in Pāṇini and his successors which does not require to be tested by the language, in order to the finding out of its real value. That this is so, a few examples will show. To the periphrastic future tense, made by compounding a *women agentis* with the present tense of an auxiliary, the root *as*, the grammarians give a corresponding middle, although the auxiliary has no middle inflection. Now what are the facts? In the Brāhmaṇas there are four sporadic instances of an attempt to make middle persons of this tense, after the analogy of the general relation of middle endings to active; and in the whole immense body of the epic and classical literature, I do not find notice of more than a single additional attempt! On this absurdly narrow basis the native grammar has built a universal formulation. The case is somewhat similar with the so-called "precative:" it is hardly more than sporadic in the older language, and in the classical tongue (which here also is a true successor of the other) it is just about as rare; but the grammarians give a precative to every verb, and even to its secondary conjugations, where it has not a single known example, either earlier or later. The precative is an aorist optative; but this the Hindu authorities ignore, though they can hardly have failed to perceive it, and they give their rules for its formation as a separate and independent part of the verb-system—in which they are followed by their European imitators. Again, the causative secondary conjugation includes a reduplicated aorist, which is not made from the causative stem, but from the original root; it has been adopted into the causative system, by a process which in the Veda is not yet complete. As was to be expected, now, the grammarians prefer to force a derivation of this aorist from the causative stem: the root being *bhā*, for example, we are not to make *abūbhuvat* from it, but from the derived stem *bhāvay*, by striking off first the *ay* and reducing the *bhāv* or *bhāu* to *bhā*—that is,

we are to get the formation from the stem, through the intermediate step of reducing the stem to the root! Here again, the European imitators, down to the very last, follow the Hindu example. Again, in a large body of verbs, a second alternative set of passive forms is allowed in the aorist and futures (e. g. from *dā*, the forms *adāyīṣi*, *dāyīṣye*, *dāyītūhe*, etc.); what the statement means is wholly problematical, since it is illustrated by no genuine quotable usage, either in the earlier language or in the later; it is perhaps some misapprehension or blunder; certainly, the matter is one with which beginners in the language never should be troubled. Once more, the ending *dhvam* of 2d pl. mid. has to become *dhvam* after an etymological lingual sibilant, lost in the present condition of the language; and, so far as is known, the change is never met with, at any period of the language, except where such a sibilant would properly stand; but the Hindu grammar gives respecting it rules which appear to be utterly nonsensical, involving conditions between which and the change no relation is to be discovered; and they extend it also to the perfect-ending *dhve*, with which it has nothing to do.

These are a few of the characteristic cases, showing what kind of guides the Hindu grammarians are. Many others, of various degree, might be adduced; but these are surely enough to enforce the conclusion, almost of itself evident, that not a single rule given or fact stated by the grammarians can be taken on their authority, without being tested by the language itself. Of course, much the greater part of what they teach is true and right; but no one until after examination can tell which part. Of course, also, there is more or less of genuine supplementary material in them; but what, is only to be determined by a thorough and cautious comparison of their whole system with the whole language. This has not been made, and is hardly making: chiefly for the reason that the skilled students of the native grammar are looking at their work from the wrong point of view. They seem to think it their duty to learn out of Pāṇini, and set forth for others, what the Sanskrit language really is, instead of explaining him out of the language, determining what in him is true and genuine, and accounting for and excusing the rest. In other words, they need to realize that, in studying the native grammatical science, they are simply investigating a certain branch of Indian learning, like the Hindu astronomy or philosophy, one that is of high interest and importance, and has also had a marked influence in shaping the latest form of Sanskrit—not always to its advantage. Some scholars appear to feel as if a fact that they find in the language is to be credited as such only when they discover it set down in Pāṇini. It may be asked, on the other hand, of what consequence it is, except for its bearing on the grammatical science itself, that any given fact is so set down. A fact in the pre-classical language is entirely independent of Pāṇini; he has nothing to do with it; one that belongs to the classical language may, even against his omission or prohibition, have its genuineness shown by other supporting facts; or it may be genuine with his assent; or it may have an unguine and artificial existence on account of his seeming to authorize it. The statement in the native grammar that such a thing is so and so is of wholly uncertain value; if, on being tested, it proves correct, it scores one to the credit of the grammar—not of the language, which is what it was before.

To maintain this is not to disparage Hindu grammatical science; it is only to refuse to bow to it as authority, to set it above, or even on a level with, our own grammatical science, characterized by objective collection and classification of facts, lucid order and method, sense of proportion, and observance of historical relations. The time has not yet gone by when discussion of the subject is seasonable. We still occasionally read in general philological works of (e. g.) the "fifth" or the "seventh" conjugation-class of verbs, and so on, as if the general student could fairly be expected to remember the senseless and unexplainable order in which the bodies of similarly conjugated roots are catalogued in the Hindu *dhatu-pāṭhas* or lists of roots (they themselves never gave them names founded on this order; that is a European perversion, and now no better than pedantry); and the very last published Sanskrit grammar in German (by a scholar long resident in India) begins with the sentence "Sanskrit verbs have ten tenses and modes"—as if, because the Hindus failed to make the distinction of tense and mode, we ought to do the same; one might about as well say that "the Sanskrit has four parts of speech: name, predicate, preposition, and particle." If the Hindu grammar is remanded to its own place, not only will beginners be relieved from learning forms

that never occur and classifications which must be abandoned later, but the study of the grammar will be made more fruitful of results for the real history of the language itself.

8. On the Cesnola Cypriote Inscriptions in New York, by Prof. I. H. Hall.

This paper consisted of a review of the New York Cesnola inscriptions, with especial reference to their treatment by Dr. W. Deecke in the first part of H. Collitz's Collection of Greek Dialect Inscriptions, and also with reference to some hitherto unpublished. Some of the inscriptions have been published twice over, as if different inscriptions, and some are given wrong side up and so are read wrong throughout. The work is characterized by brilliancy, ingenuity, and learning, but contains much that needs emendation. Many of the errors of the edition were unavoidable, being based upon the labors of predecessors which the editor had no opportunity of verifying. On this account the necessity for a revision of the work at the hands of some scholar who has access to the originals is the more immediate and pressing.

9. On the Northern Barbarians in Ancient China, by Pres. W. A. P. Martin, of Peking; read by Prof. Lanman.

The Great Chinese Wall separates now, as it has for twenty centuries, two distinct stages of civilization. On the one side are the nomad tribes of Mongolia and Manchuria, and on the other, the tillers of rich fields and gardens. Between the two, perpetual hostility has existed. At first, a line of military posts was established for protection against the nomad invaders. As a supplement to these posts was built the Great Wall. In the main, it has proved an effectual barrier, and is described as "The ruin of one generation, and the salvation of thousands."

Twice, however, has the whole of China been subdued by extra-mural invaders: once by the Mongols under Genghis Khan (ca. 1200 A. D.), who passed the wall in the northwest province of Shansi; and again by the Manchus, who entered at the eastern extremity, and are now in possession of the throne.

For three and a half centuries, then, the Tartars (and by this we mean in a general way the nomads of the north and west) have held sway in China; but, besides, there have been three periods of partial conquest: 1. From 907 A. D. to 1234, by the Tartars of the North; 2. From 386 A. D. to 532, by the Tartars of Topa; and, 3. From 202 B. C. to 220 A. D., by the Hiongnu. Had the wall been held by forces unaffected by treason or discord, it would always have proved a sufficient defense; but, as it is, the Chinese of the northern provinces have passed seven out of the last ten centuries under the yoke of the Tartar conquerors.

The third period just mentioned is nearly coincident with the rule of the Han dynasties. At that time, the tribes inhabiting the vast region from Lake Balkash to the mouth of the Amur (an extent of over 3000 miles) formed a kind of confederation under the hegemony of the Hiongnu. That the chief or Shanyu of the Hiongnu was a mighty and dreaded enemy of the House of Han is evinced by the fact that the Chinese accorded to him the sacred title of Hwangti, a name which they have hesitated to concede to the Emperor of Austria-Hungary.

During the Han and immediately succeeding dynasties, the Hiongnu were kept in check by force of arms. The later emperors sent their sisters and daughters across the frontier, in order to effect by family alliance what they could not by prowess. These transactions have supplied rich materials for poetry and romance. Thus Chau-keun, a lovely woman who was given to the Khan of Tartary to induce him to retreat with his overwhelming forces, threw herself into the Amur rather than endure the life of exile.

Prominent in the wars of the Hans with the Hiongnu were Li-kwang, Li-ling, Sz'ma Tsien, and Su-wu. The first, after seventy victories over the Hiongnu, slew himself on the battle-field, because he failed to capture the Khan. His son, Li-ling, when pursuing the flying foe too eagerly, fell into an ambuscade, and lost his division of five thousand men, and passed the rest of his days among savage foes. His relatives were executed on account of his supposed treachery, and his noble friend, Sz'ma Tsien, who guaranteed his fidelity, was disgracefully mutilated. This Sz'ma Tsien was the great historian, who submitted to mutilation instead of

execution, not because he feared death, but solely in order to gain the time to complete the history, his own imperishable monument. Su-wu was a diplomatic envoy, who was kept in captivity by the Grand Khan for nineteen years. Besides the great history of Sz'ma Tsien, there are extant the letters of Li-ling, and the tender poems exchanged between Su-wu and his wife, all interesting memorials of the time (ca. 100 B. C.).

We turn now to the still more ancient times of the dynasty of the Chau, which reigned for over eight hundred years (B.C. 1122 to B.C. 240). We are at the dawn of letters, the dividing line between the legendary and the historical periods. The Great Wall is not yet built; but the hostile tribes are there. At this period, the Chinese were few in number and occupied a comparatively small territory; but their knowledge of letters and their incipient culture gave them already a great advantage over the savage foes who beset them around.

These tribes are grouped under several comprehensive terms: those on the east are called Yi; those on the north, Tih; those on the west, Jung or Chiang; and those on the south, Man. The original sense of these names seems to be as follows: the Yi were famous archers, and were so called from their "great bows." The northerners used dogs in hunting and herding, and depended on fire to temper the cold of their rigorous winters. "Dog" and "fire" are therefore combined in the ideograph by which the Tih are designated. The Jung were armed with spears, and this their weapon furnished the symbol for their ideograph. The ideograph Chiang is made up of the head of a goat and the legs of a man, and so denotes to the Chinese imagination hideous monsters, and at the same time means 'goat-men,' 'goat-herds,' or 'shepherds,' and identifies them essentially with the Tih or nomads of the north. The character for Man combines those for "worm" and "silk," and imports that the barbarians of the south, even at that early day, were not ignorant of silk-culture.

All the tribes of the Man and the Yi (save certain aborigines called Miao-tsz') were conquered by the vigorous race whose progeny peoples modern China Proper. The tribes of the north and west, the Tih and the Chiang, were never permanently subdued. Their lands never invited conquest. On the contrary, as we have seen, it was the wealth and fertility of the North China plains and valleys that tempted constantly throughout the eight hundred years of the Chau dynasty the fierce and hungry tribes of the northwest to make their overwhelming incursions.

The oldest extant Chinese poetry, older than any history, shows us the Chinese warrior with the head of his steed and the point of his lance directed always towards the north as the source of danger. To the princes who held these northmen in check were committed the destinies of the empire. And in this way the northern tribes exercised for centuries, throughout the third or Chau dynasty, an important political influence. To give a historical instance: The house of Chau rose from a small warlike principality in the mountains of the northwest; they were strong by conflict with their savage enemies, and their chief was the bulwark of the nation. Wen-wang, by his growing power, roused the jealousy of his suzerain, the last emperor of the second or Shang dynasty, and was by him imprisoned. When the northmen made a sudden irruption, Wen-wang was set free and invested with greater power than ever; he remained loyal; but his son used the trained forces, not only to drive back the invaders, but also to overthrow the throne of his master, the Shang emperor.

In the early part of the Chau period, China had two capitals; one in the west, near Singan fu (about one hundred miles southwest of the great bend of the Hoang ho), in Shensi; and the other in the east, near the present Kaifung fu, in Honan. The former was sacked by the Tartars in 781 B.C. The heir to the throne removed to the eastern capital. But even here, in the midst of the central plain, and surrounded by a cordon of feudal States, the emperor, through the plots of a kinsman of his barbarian wife, brought down on himself the anger of her tribe, and was put to flight. By the cupidity of the Tartars, by the treachery of his own envoys, and by the intrigues of his empress, the throne of one Chau emperor after another was menaced and shaken, until the dynasty was brought to fall.

The Confucian annals mention five of the Tartar tribes as finally successful in establishing themselves in the interior of China: two in Shansi, one in Honan, one in Chili, and two in Shantung. This happened doubtless in this way: the feudal

barons asked aid of the Tartar horsemen, and rewarded their services with grants of land. The emperor sought aid in like manner against his unruly vassals. And so, at last, by too great dependence on foreign auxiliaries, the empire became unable to shake off its helpers.

In conclusion, the ethnological relations of the Hiongnu were discussed. It has been much disputed whether they were Turks, Mongols, or Huns; but it is not probable that any satisfactory conclusion will ever be reached. The ancient names, Jung and Tih, are too vague to help us in a philological way. Nor does the earliest literature of China preserve any fragments of these northern tongues, as, for example, Plautus does of the Carthaginian. Nor have these nomads left any monuments of themselves which might help us to answer the question of their origin and belongings.

As for the physical type of the Jung and the Tih, it was doubtless the same as that of the Mongol and Manchu of to-day. The primitive Chinese type, on the other hand, is no longer to be discerned. In southern and central China, it has been everywhere modified by combination with aboriginal inhabitants, whose influence is seen in provincial characteristics; while, in the northern belt, it met with tribes akin to those of Mongolia, and gradually absorbed them.

10. On some recent Assyrian Publications, by Prof. D. G. Lyon, of Cambridge.

Prof. Lyon gave some account of Bezold and Hommel's *Zeitschrift für Keilschriftforschung und verwandte Gebiete*, Friedrich Delitzsch's *The Hebrew Language viewed in the Light of Assyrian Research*, Paul Haupt's *Das Babylonische Nimrod-epos*, his own work entitled *Keilschrifttexte Sargon's*, and of J. N. Strassmaier's *Alphabetisches Verzeichniss der Assyrischen und Akkadischen Wörter im II. Bande der Cuneiform Inscriptions of Western Asia*.

After the conclusion of this paper, the customary vote of thanks to the American Academy for the use of its Library was passed, and the Society adjourned, to meet in Baltimore in October.

Proceedings at Baltimore, October 29th and 30th, 1884.

THE Society was called to order in Hopkins Hall of the Johns Hopkins University, at half past three o'clock on Wednesday, October 29th, by the President, Professor W. D. Whitney, of Yale College.

In the absence of the Recording Secretary, Professor Toy, it was moved that the Corresponding Secretary, Professor Lanman, serve in his stead for the time being; and this was voted.

The minutes of the May meeting were read, and, after some slight corrections, approved. The Committee of Arrangements announced through President Gilman that the session would be resumed on Thursday morning, and that the members of the Society were invited to meet on Wednesday evening at the house of Mr. A. L. Frothingham.

On the part of the Directors, it was announced that the next meeting would be held in Boston, on Wednesday, May 6th, 1885, unless the Committee of Arrangements (consisting of the Corresponding and Recording Secretaries) should see reason for changing the day.

On recommendation of the Directors, the following gentlemen were elected Corporate Members:

Mr. Cyrus Adler, of Philadelphia, Pa. ;
Mr. Samuel A. Binion, of Baltimore, Md. ;
Prof. James T. Hatfield, of Holly Springs, Miss. ;
Mr. John W. McCoy, of Baltimore, Md. ;
Mr. Geo. L. Shaw, of West Oakland, Cal. ;
Dr. Edw. H. Spieker, of Baltimore, Md. ;
Mr. Talcott Williams, of Philadelphia, Pa. ;
Prof. Henry Wood, of Baltimore, Md.

The correspondence of the half-year (most of it addressed to Professor Whitney) was presented to the Society, and extracts from it were read:

Rev. Henry Blodget transmits a copy of the resolutions adopted by the Peking Missionary Association on hearing of the death of Dr. S. W. Williams, and dated Peking, April 28, 1884.

Dr. N. G. Clark writes from Boston, June 12, 1884, that he has just received a note of inquiry from Rev. Mr. Logan, missionary of the American Board in Micronesia, with regard to the publication of an alphabetically arranged vocabulary of from 2500 to 3000 words of the Mortlock dialect, spoken on one of the southernmost groups of the Caroline Islands.

Rev. S. C. George, under date of Chambersburg, Pa., Oct. 17, 1884, says that his Siamese grammar is well advanced toward completion.

Rev. J. M. Jamieson, of Monmouth, Ill., for twenty-two years a missionary in India, wrote Oct. 6th, 1884, concerning the publication of a translation of the Hindi *Prem Sāgar* which he had completed in manuscript, and again on the 15th, saying that he had since then learned of the recent publication of an English version of the same work in India. It was suggested that the manuscript be deposited in the Society's library.

Miss Mary O. Pickering, of Salem, Mass., sent a letter, interesting as a memento, addressed to her father, the first president of the Society, by Professor R. Lepsius, of Berlin, recently deceased. It is dated at Philæ (the First Cataract of the Nile), Sept. 15, 1844. Dr. Lepsius thanks the Society for making him an honorary member, and gives an account of the results of his journeys and ethnographical studies in Nubia.

Mr. W. W. Rockhill, under date of New York, July 18, 1884, announced his intention of departing that day for Peking, where he hoped to be by the middle of September. He offered to present to the Society a report on the condition of Oriental studies in North China.

Mr. A. W. Thayer writes from Trieste that Captain Richard F. Burton proposes to issue at private subscription a complete translation of the Arabian Nights for the use of scholars. As the work is unexpurgated, the translator is unwilling to have it brought out by a publisher, and he pledges himself to limit the edition strictly. It will appear in ten volumes at a guinea a volume, each to be paid for on delivery. Subscriptions should be addressed to Captain R. F. Burton, Trieste, Austria.

Rev. Mark Williams, missionary of the American Board at Kalgan, North China, sends a description of very ancient mounds in his district, some in clusters on the plain (burial mounds?), and others singly on eminences (signal-towers?). Kalgan is about 120 miles northwest of Peking, and on the line of the Great (outer) Wall.

The following communications were presented to the Society, numbers 4, 5, and 6 being given during the evening meeting at the house of Mr. Frothingham:

1. The Origin of the Chinese and Korean writing, by Dr. D. B. McCartee, formerly of China and recently of Japan, now of New York City.

A chart was exhibited, showing:

1. The *Pah-kwa*, or 'Eight Diagrams,' ascribed to Fuh-hi, the legendary founder of the Chinese polity. The *Pah-kwa* were at first slips of wood arranged in various combinations, and took the place of the knotted cords previously used. The slips were supplanted by straight lines cut on surfaces of bamboo. These methods of making records were so rude and imperfect that even in the time of Confucius (the sixth century B. C.) oral tradition and memory were necessary complements for the understanding of such records. From these beginnings was developed the written character.

The hair pencil was introduced in the reign of Shi-hwang of the Ts'in dynasty (B. C. 220-206), and had an important influence in helping the formation of a more convenient system of writing, and in developing (circa 350 A. D.) the elegant cursive characters now used. The rude *Pah-kwa* are however still found in the *Yih-king* ('Book of Changes'), in books of geomancy and divination, and on

amulets. Four diagrams of the *Pah-kwa* are emblazoned on the Korean national flag.

2 and 3. The Chinese numeral symbols and the Korean imitations of them. These symbols are the written representatives of the original wooden reckoning slips. These slips are still used by the Koreans and are called by them *Ka-chi san*, a term which the Catholic missionaries rendered by *bâtonnets à calcul*.

4. The Korean alphabet or *én-mun*. This is a true alphabet, each letter representing a single sound and each sound being always represented by the same letter. The characters are composed of the simplest elements: the square, its upper right-hand angle, the lower left-hand angle, a rectangle with the right side gone, a rectangle with the sides prolonged upward, the triangle, circle, and straight line. The letters are even classified according to the organs of speech concerned in their production. This classification is shown in the similarity of the forms of certain letters; thus, the aspirates *kh*, *th*, and *ph* are made by adding a line to the signs for *k*, *t*, and *p*.

It is evident from the ancient form of the characters that they were first made by some unyielding implement. The introduction of the hair pencil has given them a more cursive form and a general similarity to the Chinese. That the characters are of real Japanese origin, as some maintain, is highly improbable. The Japanese Katakana and Hiragana show no evidence that their inventors had any idea of a true alphabet; whereas, the Korean is a true alphabet, although its elements have been combined into a conventionalized but easily analyzable syllabary.

2. On a Cursive Manuscript of the Greek Gospels, by Prof. Isaac H. Hall, of New York City.

This manuscript is in the hands of some person in or near Constantinople, known to Prof. Albert L. Long, of Robert College. Prof. Long wrote about it to Rev. Dr. Bliss of the Bible House at Constantinople, enclosing photographs of four pages; and Dr. Bliss transmitted them to Rev. Dr. Edward W. Gilman, Corresponding Secretary of the American Bible Society, who handed them to me for inspection.

Prof. Long's letter says: "The whole MS. consists of 206 leaves of stout vellum, stitched in 8vo. The order of the Gospels is Matthew, *Luke*, *Mark*, John.

"The cover is wanting. There are no mutilations, so far as I can discover, but there are stains of candle-grease, mud, etc., upon many of the pages, and occasional scrawls and rude drawings, as though it had fallen into the hands of a school-boy. There is appended a list of the Scripture lessons to be read throughout the year, but I have found no subscription from which any *date* could be made out."

Then follow some remarks unnecessary to be quoted, among which is a guess that the MS. is not later than the tenth century.

The photographs are poor, but they show an interesting and valuable manuscript. The date is uncertain, but must lie somewhere between the latter part of the eleventh century and the middle of the thirteenth. It cannot possibly be of the tenth century.

The order of books stated above by Prof. Long is rare, if not unique; but it is probably not the original one of the MS.; for the photograph shows an Arabic numeral at the top of the folio on three of the pages, which must have been a folio number. The character of these numerals is a rather old native Arabic script. The page from Matthew has the number 2, that from John 22, and that from Luke 133. So the original order of books in the MS. was probably: Matthew, John, Mark, Luke; which is not unprecedented.

The writing is a fair cursive of moderate sized letters, with a moderate amount of ligatures, and the regular New Testament *compendia scribendi*. It has uncial initials projecting into the margin to mark the beginning of a paragraph; but this uncial initial would seem to be applied to the first word in the paragraph that begins a line, as with Δε in Luke viii. 37. There is no *iota* subscript.

The contents of the photographs are as follows:

Two leaves from Matthew, v. 42 (δίδου καὶ τὸν θέλοντα . . .) to vi. 13 (end of verse); one leaf from Luke, viii. 31 (τὴν ἄβυσσον . . .) to 39 (. . . ἐποίησεν ὁ υἱς); one leaf from John, xvii. 5 (εἶναι παρὰ σοὶ ἐφανέρωσά σου . . .) to 17

(. . . ὀλίγων αὐτοῖς). The pages from Matthew are reduced in size: the others are said to be of the actual size of the manuscript pages.

The pages from Matthew show the Ammonian sections and the Eusebian canons noted in the margin, as follows: at v. 43, *μα' i* (41, 10); at v. 48, *μβ' i* (42, 10); at vi. 7, *μγ' i* (43, 10); the letter at the top, in each case, being not clear in the photograph, and hence not represented here. At the end of chapter v., and also at the end of vi. 13, is the abbreviation for *τέλος*, to mark the end of the church lesson. At the beginning of chapter vi. is the title of the church

lesson: *σα τῆς τυροφαγ'ς* (I am not sure about the last character, but the *γ* is above the line) *μαρ^θ*: i. e. *σάββατον τῆς Τυροφάγου [ἐβδομάδος ·] Μαθαίου*, or "Saturday of the cheese-eating week; [Lesson] from Matthew." (Cheese-eating week was the week before Lent, or Quinquagesima week.) This title is one appropriate to a lectionary, and out of place in a MS. of the Gospel (with the lessons noted).

The addition of *μαρ^θ* seems to show that the MS. was copied with the help of a Lectionary, if not made up from one. Another indication of the same sort will appear presently.

The text is pretty closely Stephanic; with, however, some important exceptions, as follows:

Matt. v. 47, *φίλους προ ἀδελφοῖς* (I give the accents as in the text, not as modified by quotation here).

Matt. vi. 1, *praemittitur ad initium* *Εἶπεν ὁ κς τοῖς αὐτοῦ μαθηταῖς* (another mark of lectionary make-up).

Luke viii. 34, *οἱ, ἀπελθόντες ἀντὶ ἀπήγγειλαν*.

John xvii. 11, 12, *ζ* (I supply a subscript) *προ οὗς bis*.

John xvii. 16, *καθὼς ἐγὼ ἐκ τοῦ κόσμου οὐκ εἰμὶ προ καθὼς ἐγὼ οὐκ εἰμὶ ἐκ τοῦ κόσμου*.

There seem to have been two scribes employed upon the MS. At least, the difference in handwriting between Luke and John is enough to warrant the supposition.

The manuscript would seem, from the above specimens, to be a good and valuable one; but it would be premature to attempt to state its affinities until we have more of it to judge from. The above readings are well known, and, except perhaps the last, occur in noteworthy MSS.

3. On the Hieroglyphic Evidence that Lake Mœris extended to the west of Behnesa, by Mr. F. C. Whitehouse, of New York City.

All the texts of Claudius Ptolemy's Geography (at book iv. § 20) place *ἡ Μοίριδος λίμνη* at 60° 20', 29° 20'. In § 34 and the following they locate the towns *περὶ τὴν Μοίριδος λίμνην* as follows: *Βακχίς*, 60° 30', 29° 40'; *Διονυσίς*, 60° 30', 29°. When Ptolemy gives a single position for a mountain or lake, he always means the centre, and *τὸ μέσον* is sometimes added. According to the calculation of M. Jomard (confirmed by Dr. Karl Müller, Göttingen, 26th June, 1883), the middle of *Μοίριδος λίμνη* is at Qasr Qerûn. The word *λίμνη* includes the entire district, as a technical term, equivalent to *ta-She* or *Hun-t*, the *Phiom* or *El-Fayoum*. Dr. Müller therefore said that this strengthens the view that Lake Mœris extended not less than twenty miles to the south of the southern extremity of the present Birket el-Qerûn.

Diodorus said, *τὸ δὲ βάθος ἐν τοῖς πλείστοις μέρεσιν ὀργυζίων πενήτηκοντα*, which seems to imply more than one *μέρος* or basin. This is also in harmony with the Arab traditions given by Murtadi and others, and especially by Abulfeda. "The water was drained into a south-western basin by Joseph." A tradition may state a fact founded upon subsequent observation and not history. Many Arab traditions seem to have arisen in this way. The Wadi Reian is unquestionably from 200 to 300 feet below High Nile at El-Lahun. It is dry except at a single spot, which appears to be Dionysias, where there are a few acres of palm-trees but no inhabitants. This basin if filled with water would form the southern basin of a double lake and extend south of 29°.

In the Dict. Géog. of Brugsch Bey, under MR, p. 1187, occur the following sentences: "Malgré la certitude, garantie par la suite et l'ordre des noms de leurs

métropoles, que ce nom [SAP-MOR] renferme l'antique appellation du chef-lieu du 19me nome de la Haute-Egypte, l'Oxyrhynchites des géographes, il y a encore quelques doutes à dissiper," because "le MAR dans ce côté de l'Egypte serait donc un autre lac Maréotis dont la tradition classique n'a pas conservé les moindres traces de souvenir." Dr. Brugsch adopted the Moeris of M. Linant, endorsed by Dr. Lepsius, accepted by Buusen (Eng. ed.), and so interprets all references to the papyrus 1 and 2 of Bulaq, and the third fragment or "Papyrus of the Labyrinth."

This opinion has been questioned by M. l'Abbé Amelineau and Dr. Pleijte, on the supposition that my surveys (1882 and 1883) show that Lake Moeris filled the western part of the Fayoum and the Wadis to the south. This *mu âmentî nt mar* (l'eau occidentale du pays du lac) and *mu n't mar âmentî* (l'eau du pays du lac de l'ouest) is therefore the southern part of Moeris, fed by the canal *Temt* (ib. p. 1189).

4. The Tibetan "Hundred Thousand Songs" of Milaraspā, a Buddhist Missionary of the Eleventh Century, by W. W. Rockhill, now of the United States Legation in Peking, China.

Buddhism was introduced into Tibet in the seventh century. In the latter half of the ninth, it was brought to a high degree of power and influence by the good king Ralpachan. He was succeeded at the beginning of the tenth by the last and perhaps the worst of Tibetan monarchs, Glang Darma. This king, along with the followers of the Bon-po religion, did all in his power to destroy Buddhist temples, monasteries, and books, and to persecute Buddhists. After a reign of three years, he was assassinated about 915 A. D.

About a hundred years later came a revival of Buddhism. In 1042 Lord Atisha, or Jo-vo rje, as he is generally named, came from India to Tibet, and, with other missionaries, had to begin the work of conversion on what was practically a virgin soil.

Before Glang Darma's persecution, the Tibetans had followed the Mādhyamika doctrines of the Mahāyāna school; but those which Atisha brought from Bengal were of an entirely different character, and belonged to the Tantrik school. Through them Tibetan Buddhism, or Lamaism, as it is commonly but inaccurately called, acquired the greater part of its peculiar features.

Atisha had many disciples in Tibet. The most celebrated was Bu-ston, author of the *Tchos-hbyung rin-ichen*. Marpa is the name of another Buddhist missionary of these times, perhaps a disciple of Atisha. Judging by his name, he was a Tibetan by birth; but of his works and life we know nothing save a few scattered phrases in the books written by his disciple, Milaraspā, the subject of this notice.

The exact date of Milaraspā's birth seems to be uncertain. The Vaidurya Karpo, a mathematical work cited by Csoma de Kőrös in his Tibetan Grammar, p. 184, says that he was born 1038 A. D. Sarat Chandra Dās has a valuable article, entitled "Contributions on Tibet," in vol. 50 of the Journal of the Asiatic Society of Bengal (part i., pages 187-251). On p. 238, Das places Milaraspā in the fourteenth century; but this seems to be a misprint, for on pages 206-211 he gives what is undoubtedly a translation from one of Milaraspā's works which he calls a "block-print said to be 800 years old," which agrees with Csoma's authority. Mr. Jaeschke, in his Tibetan Dictionary, p. 413, s.v. *Mi*, says: "*Mi-la-ras-pa*, often only *Mi-la*, name of a Buddhist ascetic of the eleventh century (*Vaidurya Karpo*), who between the periods of his meditations itinerating in the southern part of Middle Tibet as a mendicant friar, instructed the people by his improvisations delivered in poetry and song, brought the indifferent to his faith, refuted and converted the heretics, wrought manifold miracles, and whose legends, written not without wit and poetical merit, are still at the present day the most popular and widely circulated book in Tibet."

Two books are attributed to Milaraspā: "The hundred thousand distinct songs of the life of the reverend lord Milaraspā," in Tibetan, *Rje-btsun Mi-la-ras-pai rnam-thar rgyas-par phyed-sa mgur-hbum*; and "The biography of the reverend lord Milaraspā, the blessed lord of yoga," in Tibetan, *Rnal-hbyor-gyi dbang-phyug dam-pa rje-btsun Mi-la-ras-pai rnam-thar*. A copy of the former, obtained through the kindness of Mr. Wherry of Ludiana, is presented by Mr. Rockhill to the Society. The latter (the *rnam-thar* or biography) is in the Library of the St. Petersburg Academy, no. 436c. See Schiefner, *Mélanges Asiatiques*, i. 4. 413.

Whether Milaraspa is the author of these works or not does not readily appear from any examination of the only one to which I have had access, the *Mgur-hbum*. One might think this the work of his disciples. Jaeschke calls the *Rnam-thur* an autobiography, and it is probable that this represents the received opinion among Tibetans.

In the copy of the *Mgur-hbum* now given to the Society there are sixty chapters occupying 245 folios, partly printed, partly manuscript. The copy is very incorrect, and it is greatly to be desired that another should be obtained, to serve as the basis of a more critical examination. It would well repay careful study, as it is written in a language which differs immensely from that which we find in classical works.

The versification is very different from that usually found in the works of the *Bkah-hgyur* or *Bstan-hgyur* where all the *pādas* of a *śloka* contain the same number of syllables. Here we find such arrangements as the following: first line, 7 syllables; second, 8; third, 7; fourth, 8; first, 8; second, 7; third and fourth, 8; fifth, 7; sixth, 8; etc.

It is impossible to examine in detail the doctrines professed by Milaraspa. Chief among his precepts are the recommendations of the practice of *yoga* or meditation, and of prayer:

Free from the world, lift up your heads to laws divine
And do as I, a yogin, am wont to do.—Folio 16a.
Rejoice in the words spoken by the mighty teacher,
And often, often test the mighty weight of prayer.—Fol. 16b.

A few extracts will illustrate his mode of teaching and the points on which he lays the greatest stress.

Mgur-hbum. Chap. vi. Fol. 27–28.

Namo guru!

The reverend lord Milaraspa had come to Rkyang namkhah rdzong from Rag-ma, and one night, while stopping there, a monkey riding a hare appeared before him, bearing a mushroom shield and a straw for a lance. Laughing, the Master said: "You come to frighten me; away! I fear you not; put away all thought of harming me. My mind has embraced the body of the truth (*dharmakāya*); why flaunt your magic feats before me, for I, a yogin, scorn them!" On hearing these words, (the monkey) promised to obey him; so, vanishing as would a rainbow, it became (a human being called) Gro-thang rgyal-po.

Then this devout (lit. dispenser of gifts, *dānapati*) Gro-thang inquired of those who were round about the Master, what was so delightful in this place, and he (Milaraspa) replied in the following song:

Hear me, O Lama, my master!*
Inconceivable are the perfections of this place,
Ignored are the delights of this spot,
This lonely place, the Rkyang-phan namkhah rdzong,
This fastness here of Rkyang-phan namkhah rdzong.
O'er it spreads the purple southern cloud;
Below it flows the crystal stream;
Behind it the red rocks and heaven's expanse.
Green sward and flowers of every hue surround it.
Far from its confines the wild beast seeks its prey.
Around it soars the mighty eagle.
And on it fall the sweet, gentle showers from heaven.
On all sides the bee hums his song,
The little fawns run here and there in play,
The apes and monkeys gamboling jump about,
And loudly sings the lark when come forth its young.
The bird of gods, the white grouse whistles its sweet note.†
The brook babbles gayly o'er its clay slate bed;
The voice of time and unworthy friends‡

* His *blama* or *guru* was Marpa. He calls him sometimes "Lord of Lho-brag."

† The words rendered 'lark' and 'grouse' are *lcho-ga* and *gong-mo*.

‡ The text appears to be incorrect, but I do not see how to correct it.

Trouble not the dream of this place's sweetness.—
I sing a song of joy,
I speak words of good advice.
All ye here, you, good sir, and people,
Follow after me, do as I have done,
Shun sinful deeds and do that which is good.

Loud were the acclamations from those present, when he had finished speaking, and they said: "Good, Lord! your words delight us. Teach us, we beseech you, some easily remembered verses by which we may acquire this habit of meditation."

So, to satisfy their wish, he sang the following song:

I crave the blessing of the Lama on my mind;
O bless me, that I may comprehend the void (of all things).
I will sing a song of the joys held out by (my) religion,
Which the believing man's devotion procures him.
The visible, the void, the inseparable, three are they;
These three are comprised in the rules of the doctrine.
The visible, the invisible, the immovable, three are they;
These three are comprised in the rules of meditation.
Absence of passion and greed, perseverance, three are they;
These three are comprised in the rules of behavior.
Absence of hope, of fear, of illusions, three are they;
These three are comprised in the rules of rewards.
Shamelessness, dissimulation, deceit, three are they;
These three are comprised in the rules of the void.

When he had thus spoken, the hearers were filled with faith, and abandoned their sinful ways. Some days later, their minds being uneasy (about the Master's health), these same persons came and inquired of the Master concerning his health, and paid him their respects.

He answered their inquiries about his health in the following song:

I bow at the feet of the blessed guru.
In solitary, secluded places, in woodland depths,
Milasapa's meditative habits bring joy.
Happy is he, dwelling free from greed,
Happy, with body free from burning pain,
Happy is he, not given to the sluggard's ways;
Happy, deep in thought abstracted from all.
Happy is he, with that warmth* which knows no cold,
Happy, his penance performed with heart not faint.—
Happy is he, a husbandman seeking for naught,
Happy, with resting-place, solitary, undisturbed.
All these are the joys of the body (of a yogin).
Happy is he, carried along by both art and science,
Happy, having obtained *skyed-rjogs* and *zung-hjug*.†
Happy is he, conscious of exhaled and not coming breath,
Happy in silence free from gossiping friends.
All these are the joys of (his) speech.
Happy is he, free from selfish views,
Happy, deep in uninterrupted meditation.
Happy, the goal neither longed for nor feared;‡
All these are the joys of (his) mind.

* The more developed mysticism recognizes a "power which meditating saints by dint of long continued practice may acquire of holding back their breath for a great length of time, by which means the air is supposed to be drawn . . . into the principal artery, thus causing a feeling of uncommon warmth, comfort, and lightness inside, and finally even emancipating the body from the laws of gravity so as to lift it up and hold it freely suspended in the air." Jaeschke, Tib. Dict., p. 208, s.v. *gtum-po*.

† Two degrees of meditation, is Sanskrit *utsa-krama* and *sampanna-krama*. See Jaeschke, p. 30.

‡ Cf. Manu vi. 45.

Happy is he with enlightening, fixed, inscrutable,
 Happy all his life amid these mighty joys.
 Great the joy of mind bound by no fetters.—
 This is the burden of the song of his mighty joys.
 I sing the song of what I feel,
 It all is granted for practising the truth,
 It is the groundwork of enlightenment to come;
 Learn ye then to live this (life).

When he had thus spoken, the hearers learnt why the guru enjoyed such happiness, and great was their surprise. Having asked him whence it came, and having found it out, they said: "Why should not we also enjoy similar happiness? Teach us, we beseech you, some easily remembered verses by means of which we may acquire some small portion at least of this habit of deep meditation."

To satisfy their request, the reverend master spoke to these twelve persons the following song:

I bow at the feet of the blessed guru.
 Gentlemen, you who would know the mind,
 Learn to do as I will now relate.
 Faith, intelligence, steadfastness are three;
 These three are the mainstay (*śroṅ-gshing*) of the mind;
 He who living firmly keeps them, happy he.
 Make ye then this mainstay.
 Absence of passion, of selfishness, of stupidity are three;
 These three are the armor of the mind;
 He who wears this armor is proof 'gainst cut and thrust.
 Make ye then this armor for yourselves.
 Meditation, diligence, firmness are three;
 These three are the steed of the mind;
 Swiftly he runs towards freedom.
 Make ye then this charger for yourselves.
 Self-knowledge, self-consciousness, self-happiness, are three;
 These three are the fruit of the mind;
 If obtained, sweet is the taste of these fruits.
 Get then for yourselves these fruits.
 These are the twelve treasures of the mind,
 Which one reaches in the heart of yoga.
 Believing men, devote yourselves to them.

Thus did he speak, and they believed, and afterwards became distinguished members of the church.*

After this the Master made up his mind to go to Yol-mo gangs ra (ri?).

In the following song (folio 26b) Milaraspa contrasts quite poetically his own songs, which caution and save his hearers, with the signals of alarm of the birds and beasts which surround them.

Behind us a silken veil of white infolds the mount,
 Before it is the wish-granting forest's expanse.
 On meadows, green alps, amid wide groves,
 Among the sweet, perfumed white lilies,
 Is the loud buzzing of many insects.
 On the banks of the ponds and pools.
 The water-fowl watching turns its head,
 On the boughs of the wide spreading trees,
 Sing all the lovely songsters.
 Above, in the top branches of the trees,
 The apes and monkeys gamboling show their skill.
 On the meadow's emerald green,
 Pasture herds of many kinds.
 And to shield them from harm the herdsman

* Lit. benefactors of Lamas.

Sings, and plays on his flute of reed.
 They who are enslaved by worldly passions,
 Who in this world are given to worldliness,
 I, with the eye of yoga (far-reaching),
 On the top of the resplendent jeweled rock (?),
 Teach them by parable the impermanency of the visible world.
 A mirage, a bubble deem all worldly desires,
 This life, the vision of a dream.
 On the ignorant think with kindness.
 Feed on the vacuity of space.
 Reflect with never-wandering minds:
 All the different images which may appear—
 Forsooth, 'tis but the universal law of things—
 They all, whate'er we see, are of a truth unreal.

5. On the Book of Hierotheus by a Syrian Mystic of the Fifth Century, by Mr. A. L. Frothingham, Jr., of Baltimore, Md.

The appearance of the Pseudo-Dionysian writings in the fifth or sixth century is a fact familiar to all students of church history, as is also the influence which they exercised from that time to the renaissance. Being the production of a master-mind and covering a vast field—from the minutest regulations of the ritual to the most abstruse philosophical speculations—they came into favor not only with the more theoretic Orientals but also with the practical leaders of the Roman church, to whom they gave support in questions of church discipline and ritual. Pseudo-Dionysius, who was in all probability a Syrian monk, became during the scholastic period the great authority: his writings were the source of most of the theories propounded first in one form by John Scotus Erigena, and later in others by the school of St. Victor, by the German mystics Eckhart and Tauler, and by Thomas Aquinas himself. To read both Aquinas and Bonaventura carries one back to Dionysius as their immediate inspiring source. The Neo-Platonists of the fifteenth century, like Nicolaus Cusanus, Pico della Mirandola, Marsilio Ficino and others, continue to look up to him with reverence.

Now Pseudo-Dionysius states that he had two teachers in the faith, St. Paul, and one named *Hierotheus*: the former is of course a fiction, the latter may have more reality as will soon be demonstrated. Hierotheus is praised by him as a divine and inspired Mystic, whose writings were a second Bible and whose knowledge of divine things far exceeded his own. Pseudo-Dionysius also gives (*Div. Names*, ch. ii. § x.; ch. iv. § xv-xvii.; and *Ecc. Hier.* ch. ii. § i.) certain extracts from *Erotic Hymns* and from a work entitled *The Elements of Theology* which he attributes to Hierotheus. If all mediæval philosophy and mysticism is founded on Pseudo-Dionysius, of what interest would it not be to discover the very source of these doctrines in the writings of Hierotheus? Unfortunately nothing had ever come to light respecting the master of Dionysius and he had come to be regarded as a fanciful personage. About two years ago I had the good fortune not only to bring to light what is, in all probability, the *opus magnum* of Pseudo-Hierotheus, but also to show who is on good evidence to be considered as its real author. Of this work and the questions connected with it I propose to give a succinct account in this paper.

A Syriac MS. of the British Museum (Rich 7189) described in Rosen and Forshall's early catalogue, contains a work the title of which is: *kéthava d'eqadisha Irothéos d'al rāze gēnize d'beth Allaha*, 'The Book of Hierotheus, on the hidden mysteries of the Divine Nature.' Still the title always given to it is simply "The Book of Hierotheus." The MS. is unique, being the very one which the Patriarch Gregory Bar'ebraia succeeded in procuring, in the thirteenth century, through his agents, and of which he made an abridgment which exists in MS. at Paris (Bib. Nat.), in the British Museum, and at Oxford. This MS. is a small folio of the thirteenth century containing 167 sheets, each page being divided into two columns. Of this the text of the Book of Hierotheus occupies but a fifth part, the rest consisting of an elaborate commentary by Theodosius, Patriarch of Antioch from 887 to 895. The work is dedicated to his "son" and beloved disciple, which of course is taken by Theodosius to mean Dionysius the Areopa-

gite: it is divided into five books, each of which contains a number of chapters. The work is certainly not by a first-century Hierotheus, but is one of those forgeries which were so common, especially in Egypt and Syria. Let us see, before attempting to analyse it, who may be its real author. We read in the work of Gregory Bar'ebraia, entitled *ménarath qudshe 'al shelése 'ittanaiátha*, 'The light of the saints on the fundamental doctrines of the Church,' at the close of an enumeration of heresies: "Thirtieth heresy: that of Stephen bar Sudaili. He affirmed that there would be an end to hell-torments and that the impious would not suffer forever, but would be purified by fire. Thus would mercy be shown even to demons and everything would return into the divine nature. that, as Paul says, *God may be all in all*. He also wrote a book in support of this opinion and called it by the name of Hierotheus the master of the holy Dionysius, as if it were by the holy Hierotheus himself, which many also believe." In a passage of his Ecclesiastical History, he makes a similar statement in fewer words, the first of which I will give, as they add to the information given above. He says: "At this time (i. e. under the Patriarch Sergius of Antioch) Stephen bar Sudaili became notorious as a monk in Edessa." This statement of Bar'ebraia is not an *ipse dixit*, but is found to be corroborated by writers living more than four centuries before him, namely, John of Dara, and Cyriacus, Patriarch of Antioch from 793 to 817.

Cyriacus is quoted by Bar'ebraia in his Nomocanon as saying, "The book entitled The Book of Hierotheus is not by him, but probably by the heretic Stephen bar Sudaili." John of Dara, who cannot have lived later than the eighth century and was perhaps earlier, says in his inedited work, '*al gñāma dēphagre nakhāse*, 'On the resurrection of human bodies,' "Diodorus of Tarsus in the work which he wrote on the Oeconomy, and Theodore his disciple and the master of Nestorius, say in many places that there is an end to condemnation. The same view is taken by the work called The Book of Hierotheus, which is in reality not by him, but was skillfully written by another in his name, and is by Stephen bar Sudaili. Gregory of Nyssa also, in his treatise to Martina and in that to his sister Macrina, and in other writings, teaches the doctrine of apocatastasis, that is, the return to the first principle; and says that there will be an end to hell-torments."

There seems then to be a chain of tradition from the seventh or eighth to the thirteenth century assigning to one Stephen bar Sudaili the authorship of the Book of Hierotheus.

Who then was Stephen bar Sudaili? All the information we can gather regarding him, besides the mention in Bar'ebraia, is from two inedited Syriac letters, one addressed by Jacob, bishop of Sarug, to Bar Sudaili himself, and the other sent by Philoxenus, bishop of Mabug, to some priests of Edessa, condemning Bar Sudaili's doctrines. (From Asseman's account of these letters, Neander, Gfrörer, Dörner, and others give an important position to him). From them we learn that Stephen was a native of Edessa, and flourished apparently during the last decade of the fifth century and the first of the sixth: that is, he comes to our notice during this period. He was a monk of some repute for sanctity and good works, and at first seems to have been an esteemed member of the Monophysite sect, though he was afterwards excommunicated, and the record of this remains in the Jacobite profession of faith. Philoxenus speaks of his having followed for some time John of Egypt, and having afterwards imitated him in originating a heresy. To this fact may be added that there remain some short inedited extracts on the faith which go under the name of Hierotheus, originally written in Coptic. There is therefore a strong presumption that Bar Sudaili passed a portion of his early career in Egypt, and imbibed there a portion of his religious ideas. He afterwards returned to Edessa, and during his residence there Jacob of Sarug wrote him the above-mentioned letter of mild reproof concerning the opinion he held that the punishment of the wicked was but temporary, that hell would pass away, and all creatures be redeemed.

Quite soon (perhaps in a few years) after this, towards the year 500, we conjecture, he left Edessa to avoid persecution, and went to Jerusalem, where he entered a monastery and soon made his emanistic theories well known, and was active in forming a mystical sect. He caused a great outcry against him among the monks by writing on the wall of his cell, "All nature is consubstantial with the divine Essence." The period of his stay in Jerusalem may be fixed, from a comparison of the dates of Philoxenus and Elias of Jerusalem, at between 494 and

513. The date of Philoxenus' letter, written when Bar Sudaili had evidently not been long at Jerusalem, as it refers to his disputes with the Patriarch Elias, must be placed at about 510. This letter was written to Abraham and Orestes, priests of Edessa, as a warning against the intrigues and pernicious teaching of Bar Sudaili. It begins thus: "I have learned that Stephen the scribe, who departed from among us some time since and now resides in the region of Jerusalem, sent to you a short while ago some of his followers with letters and books composed by him. He took care at the same time that the arrival of those whom he had sent, as well as what he was astutely trying to accomplish, should be concealed from us; for he thought that were I to learn that he had sent you men and also writings, his hopes might be disappointed. He has insanely imagined . . . to put forth in a book an impious and foolish doctrine, which is worthy of being reputed not only a heresy but worse than heathenism and Judaism, because it openly assimilates the creation to God and teaches that everything must become like him." In another part he discusses Bar Sudaili's theory that the existence of the world was divided into three periods: 1st, the present fallen and evil condition; 2d, the millenium, when there is perfect rest and all is united to Christ; and 3d, the consummation and perfection, when God will be all in all, and there will be a confusion not only of the creation with the divine substance but also of the persons of the Trinity one with another.

Philoxenus shows Stephen to be a learned man, who commented extensively on the Scriptures in a mystical manner. He mentions as the first work by him which came to his notice a Commentary on the Psalms. Although Philoxenus refers in a casual way to several other writings by Bar Sudaili, it seems certain that he was not acquainted with the Book of Hierotheus.

Without giving any more time to an examination of the opinions of Bar Sudaili as they are expressed by Philoxenus, I will pass to the Book of Hierotheus. The Syriac text we possess is asserted to be not the original but merely a translation from a Greek original. The authority for this is the introduction of the supposed anonymous translator, who dedicated the version to his Mæcenas named Phileos, who had requested him to perform this work; a postscript of similar import closes the volume. To both of these Theodosius appended his commentary, and they must have formed part of the original text. This may appear quite correct; but our suspicions are awakened by finding the Syriac itself remarkably pure, easy, and idiomatic, and showing no traces of being fettered by the necessities of a translation. Compare this with the result obtained in the version of Dionysius the Areopagite by such a learned man and so competent a translator as Sergius of Rasain, who was almost a contemporary of Bar Sudaili. If we consider the Book of Hierotheus to be the work of Bar Sudaili, two hypotheses seem to be at hand to explain the idiomatic quality of the Syriac. Either, 1. we may allow that Bar Sudaili wrote the work first in Greek, but that in order to foster his propaganda in Edessa he himself wrote a duplicate in Syriac, or, 2. we may suppose that the existence of a Greek original was entirely fictitious, and that the introduction of the translator was manufactured by Bar Sudaili: this fiction was of course necessary in order to render the fraud credible. In this case the Syriac text which we possess is the real original. Taking into account the absence of any reliable traces of the existence at any period of a Greek text, I think the latter alternative the more plausible. While we find a constant tradition in the Syrian Church on the book and its author, there does not seem to exist a single mention of it by a Greek writer.

I will now give a rapid analysis of the work, only dwelling on the most salient points. It is a real theological epic, in which are developed in a most vivid manner the mystical scenes through which the soul passes on its ascent towards the Arch-Good—the Neo-Platonic One—conceived as primordial chaos. The writer himself professes to have more than once attained to the highest point of mystic union with the Arch-Good. To describe the contents in a few words, at the beginning we find the statement regarding absolute existence and the emanation from primordial Essence of the spiritual and material universes. Then comes what occupies almost the whole work—the experiences of the mind in search of perfection during this life, the key-note to which is its absolute identification with Christ, and its attempt by performing in a spiritual sense all the acts of Christ's economy to become one with Him. Finally comes the description of the various

phases of existence, as the mind rises into complete union with the primordial chaotic essence and ultimate absorption into it.

The two most interesting points in his whole system are his theory of the evolution of the universe, and his theory of its return to the original chaos. With him all distinct existence—even the Trinity—is produced by a fall. From the first fall came the Universal Essence, which, he says, is called universal as it existed after separation from the Good, and before the ordered distinction: for to it came all that which was separated from the Good, and from it came forth every nature which appears separately and distinctly. This first emanation of Hierotheus corresponds to the Intelligence of Plotinus and to the One of Proclus, containing all things within itself, but with the germs of distinct existence. Hierotheus' elaborate and orderly system of hierarchies of spiritual beings, both celestial and infernal, we can compare both with that of Plotinus and with the Aeons of the Gnostics. Most remarkable are the chapters where with bold and unrestrained reasoning he shows that the mind, after passing through its many trials triumphantly and stamping out all traces of the evil part of its nature, rises beyond the rank of Christ, the Son, beyond the Spirit and beyond Divinity, "for all distinction will cease and all nature will be confused with the Father." Essence alone will remain.

This is all I can say in such a brief notice of the contents. I cannot establish the many points of contact with the views of Bar Sudaili as stated by Philoxenus, or with the fragments quoted by Dionysius. The main thing for understanding the form in which the author clothes his thought, is to bear in mind that absolute secrecy is rigidly enjoined on almost every page; the initiated are bound by threats not to reveal any of the doctrines set forth in the Book, for fear of persecution. The same feeling prevailed even in the time of the Patriarch Theodosius, and he has recounted the difficulties he encountered in his search for a copy of the Book. It was not intended to go beyond a limited circle of the initiated.

The relation of the Book of Hierotheus to the Dionysian writings is an important factor in the problem. The question is: might it not have been produced precisely in view of the references to Hierotheus in Pseudo-Dionysius, and after the latter had come into vogue? Now I have looked there in vain for anything resembling the passages quoted by Dionysius from the writings of Hierotheus. If Hierotheus had been posterior, it would have been natural to use the title, *Elements of Theology*, given by Dionysius to the work of his master which he quotes, and to incorporate as a proof of authenticity the passages quoted by Dionysius. Throughout the book, however, there is no trace of any attempt to relate itself to the Dionysian writings; his name even is not mentioned. But the point of greatest importance is the internal evidence to be drawn from the ideal relation between them. The intellectual standpoint of the two minds was totally different, and both were original. The thought of Pseudo-Hierotheus is distinct from any philosophical system; he claims direct vision and draws his theories from his own consciousness, expressing them with great naïveté and freshness: it is the divine seer, not the philosophic genius, who speaks. On reading his Book one feels it to be the genuine out-pouring of a strongly excited religious imagination and the work of an original mind. Although in his system we find ideas from both the Christian and Pagan Schools of Alexandria, as well as traces from the Kabbalistic and Gnostic systems and even from the early Chaldaean cosmogony, yet they are marshalled into a perfectly symmetrical and harmonious whole in subordination to the ideas peculiar to Hierotheus himself. With him there is hardly ever any attempt at discussion; his theories are successively unfolded as absolute and undeniable certainties, as things which he has known and seen.

On the other hand, although Pseudo-Dionysius shows much of the same spirit in his *Mystical Theology* and *Divine Names*, yet even here there appears the logical element so conspicuous in his writings, as well as a far closer connection with the Neo-Platonists, which classifies him in a different branch of the mystical school from that of Pseudo-Hierotheus. They seem to connect the one with the West-Syrian School of Antioch, and the other with the East-Syrian School of Edessa. The relation just traced between the two would give, according to the natural development of schools, the priority to Hierotheus.

The results obtained by bringing to light this work are various. 1. Until now the period of the composition of the Pseudo-Dionysian writings could not be defined with certainty within a hundred years. Now the date is probably narrowed down within the limits of a few years before or after 500, and this not from any surmises but from certain data. 2. It becomes a moral certainty that Pseudo-Dionysius was a Syrian monk, while before this he has been variously called an Egyptian, a Greek, and a Syrian. 3. The source is disclosed from which Pseudo-Dionysius derived the mystical part of his opinions. 4. The work is the unique instance of a Spiritual Guide, a Manual of Mysticism—comparable on another plane to the Imitation of Christ—which exercised a strong influence on eastern thinkers.

Some remarks on the commentary of Theodosius will not be out of place. Throughout it, to all appearance, he believes implicitly in the work having been written by a first-century Hierotheus. Besides a long general introduction, each of the five books is preceded by a particular one. To the text of the chapters the commentary is attached in two different manners in different parts of the MS.: either the whole text of the chapter is given first, and then repeated in short sections, each with its commentary, or else the latter system alone is employed. Setting aside a considerable portion which is exegetical and explanatory of the writer's opinions, a large part consists in definitions of the words used in the text. Not only does Theodosius at the very beginning explain a long list of words in general use throughout the Book, but in every chapter he analyzes all the significant words and expressions. The definitions are often mystical and suited only to the special use of the word in Hierotheus, but in many cases they are of general use and application; and although they are in a somewhat philosophical form, yet they are always clear and to the point. The manner of defining is quite similar to that used later by the Arabian lexicographers. Theodosius is almost contemporary with Bar Ali, the author of the Syro-Arabic Glossary which is the earliest lexicographical work of any importance for Syriac. His philological endeavors show at least a tendency to analyze the language critically, and are of especial interest as explaining the Syriac by itself, and not by Arabic as in Bar Ali and Bar Bahlûl.

My intention is to publish first an introductory volume, including the text and translation of the letters of Jacob of Sarug and Philoxenus of Mabug, together with all I have been able to collect concerning Bar Sudaili and his relation to the Book of Hierotheus. It will also contain whatever is known of the Book, and finally a full analysis of the same. This volume is now in the printer's hands, and I expect it to appear before the summer. I also intend soon to prepare an edition of the text of the Book of Hierotheus with an English translation and commentary, and with as much of the commentary of Theodosius as may seem feasible.

6. On the thesis, *Zoan is Tanis magna, a suburb of Memphis, and not San el-Hagar or Tanis parva in the Delta*, by Mr. F. C. Whitehouse.

All the scholars who have given any attention to the subject are agreed that San el-Hagar is the Zoan of the Old Testament. They hold with unanimity that it was an imperial residence in the time of Isaiah and Ezekiel, and the seat of the Tanitic Dynasties. Almost without exception they infer that it was the palace of the Pharaohs of the patriarch Joseph and the Exodus. They usually identify it with Ra'amessu Miamun, a city built by Ra'amessu II., and assume that the descriptive terms, 'field of Zoan,' 'land of Egypt,' 'land of Mizraim,' 'land of Goshen,' 'land of Arabia,' 'the well-watered,' 'the rich,' 'the royal pasturages,' and other equivalent expressions, describe the adjacent country.

The Egypt Exploration Fund has assumed that this view is not open to question, and has accordingly explored the mound at San el-Hagar—but without finding any monument which confirms the opinion commonly entertained. The question, if there be any, is therefore still purely literary, and the operations of this Society having brought the subject under discussion, advantage should be taken of this opportunity to arrive at the truth.

The definition given by Fuerst (2d ed.) is a brief and comprehensive classification:

זֵאן n. p. of the metropolis (1) of Lower Egypt (2), and at the same time the oldest (3) city of the country (4) as well as the abode (5) of its (6) kings (7), Num. xiii. 22 (8), the nearest (9) district (10) of which was called זֵאן (11), Ps. lxxviii. 12. 43 (12). It lay on the east bank (13) of the Tanitic branch of the Nile, which received its name from it (14), and was the seat (15) of a dynasty down to (16) the time of Psammetichus (17), Is. xix. 11. 13, xxx. 4 (18), Ez. xxx. 14 (19), quoted by Manetho as the 21st and 23d (20). The LXX. (21) and Targum (22) render it by *Távς*; Saadia, by the Arabic form صَان (23). The Tanis of classical writers and זֵאן is the Coptic SANĒ, SANĪ, SAANE, i. e. the low region (24), whence the Hebrew and Arabic forms originated (25).

In A. D. 1168, Rabbi Benjamin of Tudela returning from Bagdad to Spain descended the Nile. He visited the Fayoum and identified it with Pithom. Four days brought him "to Mizraim, commonly called Old Cairo." The Rabbi Nathaniel, president of the Jewish University and Grand Rabbi of Egypt, was at that time "one of the officers of the great king, who resided in the fortress of Zoan in the city of Mizraim. The residence of Zoan was selected for its convenience. Zoan is enclosed by a wall, whereas Mizraim is open." It is certain therefore that in the twelfth century the Jewish inhabitants—numerous, wealthy, and learned—living under the walls of Babylon-Cairo, now Masr, supposed that the land of Zoan, Mizraim, and Raamses, lay to the south of Heliopolis and was the district which Isaiah and Ezekiel termed Zoan and the LXX. translated *Távς*. In the Itinerary of Antoninus Martyr, ca. A. D. 530, chap. xliii., this Italian pilgrim visits the nilometer at Rhoda (*Sanaah* الصنعة, Maçoudi, ii. 366), and two cities on either bank of the Nile "which the daughters of Lot are said to have built: one of them is named Babylonia." "Then (he) came through the plains of Tanis, to the city of Memphis, and to Antinoë where Pharaoh lived, from which cities the children of Israel went out." Josephus also fixes the starting-place of the Exodus at Heliopolis and particularizes the route. "The Hebrews went out of Egypt by Letopolis, a place at that time deserted, but where Babylon was built afterwards."

It is evident, therefore, that there was a continuous tradition in Egypt after the time of Josephus that the Raamses of the Pentateuch and the Zoan of the psalmist and prophets was a fortified and imperial residence within a short distance of Cairo—and, although also called Tanis, was not the place known by that name and described by Herodotus, Diodorus, Strabo, Stephen of Byzantium, and others, and therefore not the San-Tanis in the marshes of Menzaleh.

Following the order of Fuerst: (1.) There was no metropolis at San el-Hagar. It was never more than a large town (Steph. B.), and not at any time, according to classic writers, of even second rank. (2.) It never had, or could have had any preëminence or authority over Lower Egypt. Communication and commerce in the Delta necessarily followed the great canals and branches of the river. In the case of a forced march only (such as that of Titus) would it have been deemed expedient to cross the Delta. Commerce ascended one branch to descend another. Memphis-Heliopolis was the heart of the arterial and venous system of both the branches and canals of the Nile.

(3.) Zoan-Tanis is said to have been the oldest city because in Num. xiii. 22, a parenthetical clause [perhaps added by a later hand?] reads "now Hebron was built seven years before Zoan in Egypt." But Josephus, B. J. iv. 9. 7, explains: "Now the people of that country [near Hebron] say that it is a more ancient city not only than any in that country but than Memphis in Egypt, and accordingly its age is reckoned at 2,300 years. They also relate that it had been the habitation of Abraham." The context seems to suggest that the Anakim occupied Hebron before Memphis, and that both cities were founded by them. San-Tanis on the edge of the Delta must have been, like similar towns in Holland, one of the later acquisitions from the salt marshes. It is not conceivable that an A. U. C. should date from the lake-dwellings of fishermen, or that an epoch could be fixed with such accuracy. On the other hand, the founding of Memphis, in that memorable year in which the Nile was diverted from its course (Herodotus), was a well-settled historical event. While Jablonski (*de terra Gosen*) has arrayed with great force arguments which seem to me to warrant his conclusion which places Goshen south of Cairo (Opuscula ii. 184, § viii.), it is greatly to be deprecated that he permitted

himself to dispute the evidence of Josephus and to assume that "castigandus est error Flavii Josephi de B. J. c. 9, § 7, ~~πρὸς~~ accipientis de Memphi." It is the more surprising because the site of Tanis-Zoan is the only objection which he considers weighty, and he felt himself obliged to leave it as a masked fortress in possession of his opponents; and therefore for nearly two centuries his admirable treatise has been disregarded.

(4.) Even had San-Tanis been the oldest city in the Delta, it certainly was not so old as Avaris (Hawara); and the term country is very loosely applied to a region which either like the Wadi Tumilat is covered with sand, or, sunk under the marshes towards Arabia and the Serbonian Bog, has "disappeared from the map of Modern Europe" (Brugsch, *Hist. Egypt*, ii. 338).

(5.) It was never the abode of the Pharaohs (Lepsius *Zeit. für Aeg. Spr.* 1883, ii.), for at best it was only a summer residence (see, *passim*, even R. S. Poole).

(6.) It was never even the *stammhaus* of a royal family. (7.) Its kings were apparently feudal barons in the ante-Moeris period, or among those kings (rajahs) of Lower Egypt who found themselves shut up in their [separate] cities in B. C. 1300. See Dr. Birch, *Records of the Past*, iv. 39, cited by Dr. Brugsch, ii., p. 117.

(8.) The passage in Numbers is conclusive against a Zoan-Tanis north of Heliopolis. The *Távς* of the LXX. in B. C. 180 is the *Távς* of Josephus, *Ant.* i. 8. 3; but it is also the Babylon-Tanis-Memphis of Antoninus, and the Zoan-Mizraim of R. Benjamin. It is expressly qualified as Tanis in Egypt, i. e. in the district of Mizraim-Misr-Gauf, from Heliopolis to Heracleopolis. The words seem to have been added for that purpose. Titus, according to Josephus, in the expedition against Jerusalem, landing at Alexandria marched to Thmouis, and camped for the night at a certain small town called Tanis (*κατὰ πολίχνην τινὰ Τάνιν*), B. J. iv. 11. 5. His second station was Heracleopolis. As this was Heracleopolis Parva, so both Thmouis and Tanis were too insignificant to be mistaken for the vast and important places south of the 'straits' (Mizraim) of Middle Egypt, and its Bab (Babylon) at On-Heliopolis. The law of dualistic nomenclature in Egyptian geography has never been formulated. It exists. The facts also are well known. Aphroditopolis, Apollinopolis, Heracleopolis, Hermopolis, Heroonpolis (see Migne, note on Jerome), are familiar examples, and have created confusion. So Dr. Lepsius, "Diese Duplicität der Namen in Nubien und in Ägypten muss uns wie bei den Doppelstädten in Ober- und Unter-Ägypten auch immer veranlassen zu fragen ob der in Rede stehende Name dem Norden oder dem Süden angehört" (*Zeit.* 1883, p. 47). Thus Tanis of Egypt was Tanis Magna, Zoan-Cairo, the Tanis of the South.

The nearest (9) district (10) of San el-Hagar was in the days of Abraham the fetid marsh (Wilkinson) subsequently converted into a lake (Edrisi). It was never called (11) *סוּדַּרְסַּן*, for Saïd was a technical term (Abulfeda) so inscribed on the MS. map of Edrisi, Bib. Nat. Paris, 1883, and translated *πεδίων* (LXX.) or campus (Antoninus).

The plague (Ps. lxxviii. 46) of the Locusts (12) must have been in a region lying between the two seas, so that the west wind off the sea of Moeris blew the insects into the Sea of Reeds. It is doubtful whether San el-Hagar ever lay (13) on a bank of the Nile. The Tanitic branch of the Nile received its name under the walls of Zoan-Tanis-Memphis. It gave its name to its *ostium* or sea-port, through which Egypt traded with Phœnicia.

(15.) Never the seat of a dynasty for any continuous (16) period, there is nothing to lead us to believe that in the time of Psammetichus (17) ambassadors from the kings of Judah (Isaiah) (18) would have descended North from Memphis to San-Tanis-Parva, while the messengers of the same embassy were ascending seventy miles to the South of Cairo to Hanes-Heracleopolis-Magna. Nor would (19) the sacking of this provincial capital be named in the same category with such ruin as that wrought "when Cambyes laid Mizraim-Egypt waste" (Josephus), and successively mastered the cities of the Heptanomis.

(20.) It is by no means probable that Manetho ever intended to indicate dynasties ruling in San-Tanis. The Semitic historians are explicit. The dynasties of Egypt, enumerated by Makrizi (except the Alexandrian), ruled from their various fortresses near Cairo. Memphis, Fostat, Al-asker, Al-katai, Cahira, were the Louvre, Luxembourg, Elysée, Vincennes, or Versailles of the natural home of all the Lords of the Two Egypts.

(21.) The LXX. having therefore qualified Tanis, could not suppose (ca. B. C. 180) that any further explanation was needed. Nor was it, as the consensus of tradition shows. The Targumists (22), Jonathan and Jerusalem, in Gen. xlvii. 11, put Pelusium for Raamsea, and translate Ex. i. 11 by טנין (Tanin) and פלוסין (Pelusin): but Antoninus has explained that two faubourgs of Memphis were called after the daughters of Lot, and "a daughter of Lot" was (patronymically) פלוסין (i. e. *Pa-Lot-ith*). And so we find that a Tanin and a Pelusium were pointed out as holy places to Latin pilgrims in the fifth century near Cairo. See Fabricius, *Codex Pseudep.* V. T. 2d ed., Hamburg, 1722, p. 431.

If Es-Saadia renders Zoan صاني (23), he never doubted that Pithom was the Fayoum, and Heliopolis or "El-Ariah" (i. e. Pelusium-Memphis) the starting-place of the Exodus. If SANE be Coptic for the low region (24), it is also equivalent to Zoan in its sense of convenient (R. Benjamin) from the obvious association of Ta-an (the Valley) with an abundant supply of water. The Hebrew and Arabic names originated in this connection and were so applied.

There is a very large body of evidence to corroborate these positions, well collected and lucidly stated by Jablonski (op. ii.). Dr. Birch has shown that Tanen was a name for Memphis B. C. 1300. Meneptah II. had entrenchments drawn to protect the city of On, the city of the god Tum, and to protect the great fortress of Tanen (i. e. Memphis). Records of the Past, iv. p. 39, cited by Brugsch. Hist. ii. 117.

7. On the second Part of the fifth Volume of the Cuneiform Inscriptions of Western Asia, by Prof. D. G. Lyon, of Cambridge, Mass.

This paper called attention to the alphabetical arrangement of the list of verb-forms published on page 45. Two principles of arrangement were pointed out. 1. Many words are placed together in a group, because they have the same first two radicals. 2. The words within such groups are arranged alphabetically, according to the last letter, as in native Arabic lexicons. The order of the letters familiar to the scribe differs but slightly from the Hebrew order. The tablet bears no date, which is the more to be regretted, because it is very interesting to inquire how early the Babylonians and Assyrians became acquainted with an alphabet. The place of discovery might give some clue to the date of the tablet.

On page 66 a clay cylinder inscription of Antiochus is published, recording his restoring and adorning two great Babylonian temples. He styles himself *An-ti-i-ku-us*, the great king, the mighty king, son of *Si-lu-uk-ku* (Seleucus), the king, *Mu-ak-ka-du-na-a-a* (the Macedonian). At the close he invokes blessings on himself, on his son *Si-lu-uk-ku*, and on his wife the queen, who bears the name *As-ta-ar-ta-ni-ik-ku* i. e. *Σταρτονική*. The tone of the inscription is as reverent toward the god Nabu as any native Babylonian king might have employed. It is probable that Antiochus undertook the restoration for state reasons, just as Cyrus seems to have done, and that the language is the conventional scribal-priestly style, which had been in use for many generations.

8. On the classification of certain Aorist-forms in Sanskrit, by Prof. W. D. Whitney, of New Haven, Conn.

There are certain 2d and 3d persons singular middle in Sanskrit, belonging to the aorist, respecting which it may be doubtful to which form of the aorist, the root-aorist or the *s*-aorist, they ought to be referred; the native grammarians classify them as belonging to the latter. Attention was called to these in the writer's Sanskrit Grammar (§§ 834, 881, 883-4); but the fuller collection of material, and the addition of other facts bearing upon the question, make a re-examination of it not superfluous.

The first group of roots that may be noticed making such forms end in *r*: thus, from *kr* 'make,' *akṛthas akṛta*. There are 9 roots from which forms like these are quotable: *kr* 'make,' *dhṛ* 'heed,' *dhṛ*, *bhṛ*, *mṛ* 'die,' *vr* 'cover,' *vr* 'choose,' *stṛ*, *hṛ*; with three or four exceptions, the forms occur only in the older or pre-classical language. Is there, now, any good reason why we should assume mutilation of

a-kṛs-thās, a-kṛs-ta etc., by omission of the aorist-sign *s*? From three of the roots in question, we have unmistakable root-aorist middle forms in the older language: thus, *akri akrātām akrata krāṇa, amrātām, acri*; from three others are found active persons of the same formation; from six of the nine occur also middle forms from the *s*-aorist. There is, then, plenty of justification for regarding the forms in question as made from the root-aorist; and, until some reason or analogy shall be made out for the otherwise assumable loss of the *s*, such would appear to be the preferable view. More confidently than this we perhaps have not the right to speak, until we can explain why *r* alone among final vowels is not strengthened in the middle tense-stem of the *s*-aorist, or why there is an entire absence in the language not only of such forms as *akṛsthās akrsta*, but also of any others in which a *s* immediately follows a short vowel; although such forms as *akṣesthās, anestā, acyoṣthās acyoṣta* are made often enough from roots ending in *i, ī, u*; also such as *ahāsthās ahāsta*, and *agisthās agista*, from *ā*-roots, and *aksamsthās aksamsta* from roots ending in a nasal. On the other hand, from certain roots in *ā* and in a nasal we have forms exhibiting a short vowel, and after them an absence of the *s*. Thus, the three roots *dā* 'give,' *dhā* 'put,' and *sthā* all make forms like *adithās adita*. The native grammar reckons these to the *s*-aorist, in the same manner as those discussed above; but the question again arises whether this is right. And the occurrence in the older language of such evident root-aorist forms as *adimahi, adhimahi, asthiran* again indicates that the forms are probably of the same order. A mutilation of *adisthās* to *adithās* seems even less plausible than of *akṛsthās* to *akṛthās*. Once more, from three nasal roots we have the forms *agathās agata, atathās atata, amata*, and are taught by the grammarians to refer them to the *s*-aorist; while the analogy of the root-imperfect *ahathās ahata* from the root *han*, and the occurrence of such aorist persons from the same verbs as *ganmahi agmata, atnata, amanmahi*, teach us yet again to regard the classification as false, and the forms in question as belonging to the root-aorist. Not admitting any middle inflection as belonging to the root-aorist, the native grammar would appear to have referred to the *s*-aorist such relics of the former as had not been entirely lost in the later language.

Next we come to consider the cases of the same kind from roots ending in non-nasal mutes. That, in the inflection of such roots, the *s* aorist-sign should be lost between the final mute and the *t* or *th* of the personal ending, is both supported by other familiar facts in the language (as *ut-thā, ut-tabh*), and put beyond question by the occurrence of similarly mutilated forms of the active aorist, where the vriddhied root-vowel leaves no room for doubt as to the classification. The quotable examples of the latter kind are very few: they are *achāntā* (✓*chand*), *tāptam, cōpta, abhākta, amāuktam*. In the last two cases, it will be noticed, the combination is not made as if from *abhāks-ta, amāuks-tam* (which, according to ordinary euphonic rule, would yield *abhāsta, amāustam*); the uncombined *s* is as totally lost as in *tāp-tam* for *tāps-tam*. But in the middle, where the root-vowel remains unstrengthened alike in the root-aorist and the *s*-aorist, the true classification becomes a matter of real doubt. For example, *patthās* admits of explanation equally as for *pad-thās* and *pad-s-thās*; and there are supporting forms for either: *apadmahi* and *apadran* for the former, *apatsi* and *apatsala* for the latter. A like case is *ayukthās ayukta*, where the occurrence of *ayujī ayujmahi ayujan* makes for the one explanation, and that of *ayukṣi* and *ayukṣata* for the other; and the objection that *ayuks + ta* ought to make *ayusta* is refuted by *abhākta* etc., considered above. It is plainly impossible to determine these and similar cases with certainty; in the later language they must be referred to the *s*-aorist; and this is especially easy if other forms of that aorist occur. The persons are quotable from 20 roots: 5 ending in *d* (*chid, nud, pad, bhid, mad*), 3 in *p* (*tap, tīp, tṛp*), 4 in *c* (*pṛc, muc, ric, ruc*), 1 in *ch* (*prach*), 7 in *j* (*bhaj, yuj, vij, vṛj, saj, yaj, tṛj*); and the root in *ch* (*prach*) and two of those in *j* (*yaj, tṛj*) have, as in their other forms (e. g. the passive p'ple), *s* before the endings—thus, *aprasa, ayasṣta, asṣsthās asṣsta*; while those in *c*, and the others in *j*, have in like manner *k*—thus, *apṛsthās apṛkta, vikthās vikta*, etc.

One other group of forms calls for notice: those, namely, made from roots ending in a sonant aspirate, as *rudh*. For these, the native grammar prescribes the omission of the *s* in both active and middle, before an ending in *t* or *th*, and then the further combination as if the sibilant had never been present: for exam-

ple, the 2d plur. *arāuddha*, as if from *arāudh-s-ta* directly, with loss of *s*, not from *arāuts* (= *arāudh + s*) + *ta*; and in like manner *arāuddham arāuddhām* active, and *aruddhās aruddha* middle. No example, now, of such an active form is, to my knowledge, quotable from the whole literature, earlier or later; and of the middle forms the examples are excessively few: namely, *arabdhā, alabdhā, aruddhā* from the older language; *abuddhā, ayuddhā* from the classical; and the anomalous *drogdhās* (which we may doubtless amend to *drugdhās*) from the epic (MBh. iii. 11,002, p. 569). All these middle forms, it is evident, could be without difficulty regarded as belonging to the root-aorist: and beside *aruddha*, found only in Māitr. S., we have in the same text *arudhna*; while *abudhran* in RV. gives a like aspect to *abuddha*. That, however, the reference of these forms to the *s*-aorist, as made by the Hindu grammarians, involves no unsupported and inadmissible phonetic process is, in the first place, made probable by the occurrence of such forms as *abhūkta, amāukta*, etc., treated of above, which show a like total loss of the sibilant; and, in the second place, it is put beyond question by a set of curious and apparently anomalous forms made from the roots *ghas* and *bhas*. Both these roots, namely, show a disposition to suffer elision of the radical vowel (thus, *akṣan jakṣiti, bapsati*); and then, before a *t*, the *s* equally disappears without trace, and the *t* is combined immediately with the preceding aspirate. Thus, from *ghas* comes the augmentless 3d sing. impf. middle *gdha* (for *gh-s-ta*), the pass. p'ple *gdha* (in *aygdhād*), and the noun *gdhi* (in *sagdhi*). These are all of the greatest rarity; but from the reduplicated root-form *jaks* (= *ja-gh[a]*), the derivatives *jag-dha, jagdhum, jagdhvā, jagdhi* are not uncommon, and occur in every period of the history of the language. From *bhas* or the reduplicated *baps* occurs only *babdhām* (for *babh[s]tām*), and that only in a sentence quoted in the Nirukta (v. 12; the form is also given in Nāigh. iii. 8); but the analogy of the derivatives instanced above from *ghas* puts the genuineness of the form out of the question. There is involved here an anomaly in the phonetic treatment of *s* which will probably be found very hard of explanation. But the grammarians are evidently justified in regarding these forms as capable of being referred to the *s*-aorist;* and we have here, as in the preceding group, persons which admit an alternative explanation, as belonging either to the root-aorist (in the older language) or to the *s*-aorist.

9. On a Syriac Manuscript of the Acts and Epistles, by Prof. Isaac H. Hall.

Some time last September I learned that Mr. R. S. Williams of Utica, N. Y., a brother of the late Prof. S. Wells Williams, and of the late William Frederic Williams, missionary to Mossul and Mardin, had an old Syriac manuscript in his possession, which was said to contain the book of Revelation. As only one manuscript of the Revelation in Syriac is practically known, and that late, I felt bound to inquire about it at once: and Mr. Williams very kindly and promptly sent me the book to examine. I immediately found that it did not contain the Revelation, but something about as rare and good: the Second Epistle of Peter, the Second and Third Epistles of John, and the Epistle of Jude, in the version commonly printed in our Syriac New Testaments. That version, and all the printed copies, are known only from one manuscript, in the Bodleian Library at Oxford, England: and Edward Pococke's edition of those Epistles, from that manuscript, printed by the Elzevirs at Leyden in 1630, is the sole parent of the printed texts, except so far as they have been modified by editorial conjecture.

In this fact lies the chief interest of the manuscript—but that is not its only interest. The manuscript consists of the Acts, the Catholic Epistles, and the Pauline Epistles, in this order: with a few tables of feasts and lessons at the beginning, and a poem in honor of the Trinity and relating the manufacture of the book at the end. Its date is given in a colophon, which states that the work was finished at noon on Thursday, the fourth day of the sultry month Tammuz, in the year of the Greeks 1782. This date corresponds to Thursday, July 4th, 1471, according to our reckoning.

The manuscript is written on cotton paper, *charta damascena*, in a rather western

* And the paradigm given in the writer's Sanskrit Grammar, § 882, requires amendment accordingly.

Syrian hand, in two columns to the page, and regularly twenty-five lines to the column. One leaf, the first, is now gone, but it originally contained 150 leaves of text and tables, and two leaves more for the poem at the end. The size of the leaf is $10\frac{1}{2}$ by $7\frac{1}{4}$ inches; of the columns, $8\frac{1}{2}$ inches high by $2\frac{3}{8}$ wide; space between the columns, $\frac{1}{4}$ inch; size of the written page, $8\frac{1}{4}$ by 5 inches. The quires are *quiniones* in the first part of the book, but in the latter parts they are *quaterniones*, except the last, which is a *ternio*. A later hand has numbered the folios, in Syriac numerals. While most of the manuscript is written on paper of double thickness, some portions are written on paper of single thickness, which, from the glazing (probably), has a darker color than the rest, and which allows the ink to show through. But it is all of the same age, as appears by many proofs.

Besides the scribe's general introduction and colophon, there is a preface to the Acts, to the Catholic Epistles as a whole, and to each one of the Pauline Epistles. That to Acts is avowedly taken from the "Treasure of Mysteries" of Mafrianus, i. e. Gregory Bar Hebræus; and I find by comparing that the preface to the Catholic Epistles comes from the same source; but I am unable to say whether those to the Pauline Epistles do or do not, for I have not that portion of Gregory Bar Hebræus to compare them with.

The church-lessons are given in red in the body of the text, and their numbers in the margin; and the Syriac sections, or chapters, are likewise given in the margin. In both, the Acts and Catholic Epistles are treated as one book, and all the Pauline Epistles (closing with the Epistle to the Hebrews) are treated as another.

The ordinary Syriac sections suffer some derangement because of the introduction of the *antilegomena* Epistles above mentioned. In the ancient and ordinary division the Acts and Catholic Epistles have 32 sections or chapters; section 31 beginning at I. John ii. 7, and section 32 at II. John iii. 21. But in this manuscript section 31 begins at II. Peter i. 13; section 32 at II. Peter iii. 8; section 33 at I. John ii. 21; and section 34 at I. John iv. 2; the whole having three more sections here than ordinarily.

The manuscript is very carefully vowelized and pointed throughout, with the points *qushshoyo* and *ruchcho* supplied in red. Besides these, there is an abundance of Syriac and Arabic marginal notes about the vowels and points, and about other matters, orthographical, grammatical, and linguistic, which give the manuscript a great and special value. Some of these notes are like those of Gregory Bar Hebræus, but many, if not most of them, are not found in his commentary. There are, also, some literary and scriptural comments.

The *antilegomena* Epistles, above-mentioned, are a rather better text than that commonly printed, sometimes coinciding with the editorial conjectures, but quite as often holding to the other manuscript authority. It sometimes supplies Pococke's omissions, e. g., in rendering *προφητας* in III. John 6.

But further matters of interest about the text, the titles, the subscriptions, and the comments, may be left for a more extended article. A few words about the origin of the manuscript will be enough to close this preliminary account.

From various internal reasons, I have been inclined to suppose that the scribe was one of the St. Thomas, or Malabar Syriac Christians, on a visit to his western brethren; one of whom wrote the Leyden Apocalypse, with a few other manuscripts extant in Europe. The poem at the end calls the writer a layman, in a strange country, and uses the far-eastern term "*Sahib*" to characterize one of his friends. The scribe does not give his name, but tells pretty well the circumstances of his writing, as well as who furnished the paper, and who paid him for writing. But an extract from the poem itself will best tell sundry points:

"This book, in which are the Acts of the Apostles,
And their Catholic Epistles that are seven,
And the seven and seven of him that was architect of the faith—
Fourteen epistles of Paul [who was] filled with wisdom—
Was written for my dear brother in love,
Young Selimûn, who loves the wisdom from the Son of David,
Who endured much weariness with me, and showed me much kindness,
And in all my straitness shared with me in prudence.
A wretch wrote it, who is full of faults and all things hateful—
A stranger, yea, a sojourner in the region—

And that are not worthy that I should sign plainly in my book
 The name of my poverty, with a hand full of faults and follies.
 Behold, my head bowed, and with urgings and sighs,
 I beseech the brethren whom time in its length shall bring,
 That they will pray for me with a kind heart and with diligence,
 And that they will say to the Lord, with their remembrances and prayers:
 Good Lord, abundant in love and full of goodness,
 Pardon thy servant, who wrote this book in love;
 Forgive his defects, also his folly, and all faults
 That were committed by him in this world full of trouble;
 Forgive his fathers who erred in their opinion of the faith.
 And make their souls to dwell with thee in the kingdom."

The rest of the prayer includes all his benefactors, and is beautiful enough to translate entire; but besides the above reference to his heterodox fathers, we need only mention his two grandmothers and his mother, who brought him up and paid the expenses of his education, and a number of others whom he specifies by name as having helped him in the place of his exile, and were "diligent to establish his living without impediment." Unfortunately, a mutilated place occurs in the very interesting portion in which he speaks of the compilation of the book; but I will add a translation of the parts that remain:

"I have been diligent with this book [in my place of exile (?)],
 Vowel-signs and vowel-points
 Abominable to the Lord is
 And what also is that which is written according to strength?
 Let no man say that this
 Or that in my good knowledge or strength
 Far be it; this shall not be to the man
 Since I am vile, of the children of the grave.
 But I brought forward my writing to this worthy diligence,
 Just as a witness who in weakness beholds the letters.
 But it came to this polish for two reasons:
 First, from love to him who purchased the book and its polish;
 And second, because I had learned accuracy
 In respect to all the points and vowels of the words and syllables.
 I gathered books, so that what I knew not might be investigated;
 And I proved them in the strength of God who giveth wisdom;
 And in this book and that book, with fixed attention,
 I kept closely scrutinizing, bringing it forth word by word.
 And this also is a thing that shows a work of prosperity,
 That no man has minished aught from it of the sweet strength of sweetness (or, correctness)."

(In the last line the word for "sweetness" contains a play that cannot be rendered: it means "correctness" as well.)

However, the conclusions to be drawn from this poem have to be modified in one respect by an Arabic note that just precedes the text of the manuscript, or that just follows the tables at the beginning. From this it appears that one Daūd esh-Shāmi il-Homsi, or David the Syrian of Homs (Hamath), had found this excellent work, owned by Suleimān (the name spelled Selimūn in Syriac and in the poem), at the fortress of Husn Kīfa, and finding it so much better than any manuscript of the same matter that he ever saw (and he had seen many)—divided into its chapters or sections, provided with lessons, notes, etc., and accurately made pointing and vowels—had obtained a copy for his own use. Husn Kīfa, as Dr. Van Dyck has kindly informed me, is described by the Arabic geographers as a fortress overlooking the Tigris, either quite up in Armenia or on the borders of Armenia and Mesopotamia. It would seem, therefore, that the poem describes an original critical edition of the Acts and Epistles, of which David of Hamath obtained a contemporaneous copy (this manuscript), which he may have brought westward. Still Daūd el-Homsi would not be called el-Homsi except away from home: and this fact rather goes against its having been brought westward. The handwriting of the book, though of the style called western, appears to be that which the Malabar sojourners used. However, I find nothing in the scrawls

(Syriac, Arabic, and Carshun) which shows any complete history of its possessors, but some few of them are written in a Nestorian hand. When Mr. Williams obtained the manuscript, he was a resident of Mardin, but he was continually engaged in making extensive journeys, so that it is impossible to say just where he procured it. He obtained it, however, from an aged priest, who probably only parted with it because he was unable to read it.

It is bound in old leather, with a flap, the stiffening of the boards being supplied by other Syriac manuscript. Except a new back, pasted on, the binding is doubtless the original one. Unlike many Syriac manuscripts, this book is a "ruled copy;" but the rulings about the columns show plainly that they were made *after* the writing, not made first to bound or mark it out.

10. On the Position of the Vāitāna-sūtra in the Literature of the Atharva-Veda, by Prof. M. Bloomfield, of Baltimore, Md.

In this paper an attempt is made to define more exactly than has as yet been done the position of the Vāitāna-sūtra in the literature of the AV. On several interesting points light was gained from the *Atharvāṇīya-paddhati*, a second paddhati to the house-ritual of the AV., two modern copies of which at the Royal Library of Berlin I had the privilege of using for my forthcoming edition of the Kāuṇika. This differs from the *duṣa karmāṇi* (Proceedings of the A. O. S. for October, 1883, p. vii) in that it not merely paraphrases the description of certain rites of the Kāuṇika, but rather comments upon them somewhat independently, occasionally differing from Dārila, the commentator of the Kāuṇika.

After a short introduction, it turns to the *paribhāṣa-sūtras* at the beginning of the Kāuṇika, then continues with the *ājya-tantra* (here called *bṛhat-kuṇḍikā*) with its appendix the *uttaratantra*; then it treats the personal *saṁskāras* (giving after the *upanayana* the following *vratas*: *vedavrata*, *kalpavrata*, *mṛgārvrata* I, *viśvāhivrata*), then *laghuṣālakarman*, *bṛhacchālakarman*, *pāntiyudaka*, *sampatkāma* (*karman*), *pustikāma* (*karman*), *abhicāra*, *vṛddhiṣṭaddhu*, *dahanavidhi* (with *asthi-samācayana*, *piṇḍādāna*, *sodācopacāra*, and *vṛṣotsarga*).

The paddhati quotes, in addition to the regular Atharva-books: *Dārila*, once in connection with two other commentators, *Bhadra* and *Rudra* (*dārilo rudrabhadraū ca trayas te bhāṣyakārāḥ*), both of whom are not otherwise known as commentators to the Kāuṇika; further, a paddhatikāra named *Keçava*; *Upavarsa*, the author of a *mīmāṃsā* (i. e. *pūrvamīmāṃsā*) work; likewise the *Pañcapatalikā*, cited also by Dārila to Kāu. 8. 22; and finally *Paithinasi*. The latter is cited frequently and familiarly by Dārila; and it seems barely possible that the smṛti of Paithinasi may go back to a dharma-sūtra of the AV. Often as this text is cited, no MS. of it has as yet come to light. The name of a teacher *Mausaltiputra* Paithinasi occurs also in Atharva-pariṣeṣa 3. 3 and 17. 13.

Indian tradition is unanimous in presenting the ritualistic literature attaching itself to the Atharva-Veda as consisting of five kalpas, whose names vary somewhat in the different sources. By combining the statements of the *caranavyūha* of the White YV., the *caranavyūha* of the AV. (AV. Pariṣeṣa 49), the *Devipurāṇa*, *Viṣṇupurāṇa*, *Bhāgavata-purāṇa*, *Atharvāṇīya-paddhati*, and *Sūyana* in the introduction to his commentary to the AV. (London Academy, June 5, 1880), there result the following names:

- I. The *Kāuṇika-sūtra*, known also as *Saṁhita-kalpa*. or *Saṁhitā-vidhi*.
- II. The *Vitāna-kalpa* or *Vāitāna-sūtra*.
- III. The *Nakṣatra-kalpa*.
- IV. The *Çānti-kalpa*.
- V. The *Āgriṣa-kalpa*, or *Abhicāra-kalpa* or *Vidhāna-kalpa*.

Very noteworthy is the statement of Sūyana that these ritualistic books belong to four of the nine cākhās of the AV., the *Çāunakiyās*, the *Aksadās*, the *Saladās*, and the *Brahmavādās*. I find essentially the same statement in the introduction to the Atharva-Paddhati: *atharvavedasya nava bheda bhavanti: tatra catuṣṣu cākhāsu çāunakādīṇu kāuṇiko 'yam saṁhitāvidhiḥ*. . . The last three of these texts hardly rank in value above pariṣeṣas, so that the authoritative ritual books of the AV. are the Kāuṇika and the Vāitāna.

Of the usual dependence of the grhya-sūtras upon the çrūta-sūtras nothing is found in the correlation of these two texts. On the other hand, the Vāitāna

depends upon the Kāuṣika at almost every point where the difference of the subject-matter and the difference between Vedic ceremonial and house-rites allows it. The position of the Vāitāna may therefore perhaps be described as follows: It is not the product of practices in Vedic ceremonies, which have slowly and gradually developed in a certain school, but probably a somewhat conscious product, made at a time when Atharvavedins in the course of their polemics with the priests of the other Vedas began to feel the need of a manual of Vedic practices distinctly Atharvanic. That the A.V. is poorly fitted for furnishing the foundation for Vedic ritual can be seen from the fact that very little belonging to its proper material (*carmina, devotiones*), and not borrowed from the Kāuṣika, is to be found. On the other hand, it contains numerous verses and formulas from the Yajus-saṁhitās, and in the description of the ritual it follows very closely Kātyāyana's Ṛgveda-sūtra. Vāitāna Sūtra i. 8, *devatā havir dakṣiṇa yajurvedāt*, seems to make formal recognition of this fact. On the other hand, the relation of the Vāitāna to the Kāuṣika may be described by stating that the former treats the latter almost as if it were another saṁhitā, taking for granted that its ritual, and the mantras which it quotes from other sources than the vulgata, are understood and known by its readers.

The points of contact between the two texts in general are very numerous. In the matter of external form it may be worth noting that the Vāitāna-sūtra proper, which contains eight adhyāyas, is frequently found extended to fourteen adhyāyas by the addition of prāyaścitta-sūtras. This may have been done in deference to the fourteen books of the Kāuṣika. Both texts frequently begin a chapter with a long mantra-passage, which belongs to the action of the preceding chapter; they frequently introduce ṣloka-passages by such phrases as *tad api ṣlokāu vadatah, tatra ṣlokaḥ*, etc.; both occasionally refer to the *brāhmaṇa* with the expression *brāhmaṇoktam* or *iti brāhmaṇam*. I have not noted in the Vāitāna the practice common in the Kāuṣika (it occurs about a dozen times) of disregarding hiatus produced by sandhi (e. g. *patnyāḥjalāu = patnyās aḥjalāu*); but each text has once a nominative plural employed as accusative in very similar phrases: Vāit. 11. 24, *aṅgusthāprabhrītyas tīra uccrayet*; Kāuṣ. 8. 19, *trayodaśyādāyas tīro dadhimadhuni vāsāyitvā badhnāti*. Both texts employ very commonly the expression *mantrokta*, 'the person or the thing mentioned in the mantra.' They share also many technical terms which are restricted wholly to the Atharva-ritual, or occur preponderatingly in it. So the *purastūddhoma* and *saṁsthitaḥoma*; the terms *sarūparatsū* and *sūrūparatsa*, *sampāta* and *sampātavant*, *ākṛtiloṣṭa*, *śāntiyudaka*, *rasapracanti*, *puṛodāṣasainivarta*, *yūmasārasvata*. Further, the teachers mentioned in the Vāitāna occur in the Kāuṣika, and the designations of *gaṇas*, 'groups of hymns,' single hymns of prominent character and wide application, and groups of verses, are essentially the same: e. g. the hymns called *cātvanāni*, *apāni*, *sāktāni*, *śambhumayobhā*, *aṣṭapāliya*, and the verses called *gandhāpravādā*, *jivā*, and *utthapant*. Finally, there are about fifty passages in the Vāitāna, in which the ritual described exhibits a more or less close resemblance to performances of the Kāuṣika; of these a concordance has been made.

It would certainly be going too far to suppose that the Vāitāna has drawn upon the Kāuṣika for all these correspondences; it is very probable that many of the specialties shared by both texts were simply current in the Atharvan schools in such a way that they would be at the bidding of the compiler of a religious manual at any time. But in looking over these parallels it is found that the Vāitāna frequently exhibits a certain fact or series of facts in a fragmentary way, merely presenting certain features of a group of facts, which the Kāuṣika has apparently in full. E. g., the Vāitāna mentions Atharva-teachers here and there: *Kāuṣika*, *Yuvan Kāuṣika*, *Bhūgali*, *Māthara*, *Çiunaka*. The Kāuṣika presents all these, but in addition also *Gūrgya*, *Pārthacravasa*, *Kānkāyana*, *Paribabhrava*, *Jitkāyana*, *Kiurupathi*, *Isuphali*, and *Devadarga*. The same superiority of the Kāuṣika is exhibited in its knowledge of a much larger variety of hymn-*gaṇas*, names of single hymns, and verse-lists. The paribhāṣa-sūtras for the bulk of the Kāuṣika are contained in chapters 7 and 8. These are not unknown to the Vāitāna, but yet only two distinct references to them occur: Vāit. 10. 2, *arāṭiyor iti yūpani vṛcayamānam anumantṛayate*; Kāuṣ. 8. 12, *arāṭiyor iti lakṣaṭi*; Vāit. 10. 3, *yat tvā cikva iti prakṣīlyamānam*; Kāuṣ. 8. 13, *yat tvā cikva iti prakṣīlayati*. The terms *ākṛtiloṣṭa*, *śāntiyudaka*, *sampāta*, *sūrūparatsa*, which are so characteristic of the Kāuṣika, occur but once or twice each in the Vāitāna.

Still more noteworthy is the fact that in a number of passages the Vaitāna refers to ritual described in detail in the Kāuṇika, indicating merely the first and last traits of the performance. E. g., Vait. 1. 19 *jivābhīr ācamyetyādī prapadanāntam*, 'He performs the rite at the beginning of which he rinses his mouth, while uttering the jivā-verses (AV. xix. 69. 1-4), and which ends with the *prapad*-formula.' Kāuṇika 3. 4 describes it in full: *jivābhīr ācamyo 'potthāya vedaprapadbhīh prapadyata om prapadye bhūh prapadye bhuvah prapadye svah prapadye janat prapadya iti*. And in the same manner Vait. 11. 14 = Kāuṇ. 24. 26-31; Vait. 24. 3 = Kāuṇ. 7. 14; Vait. 24. 7 = Kāuṇ. 6. 11-13. Still more valuable is the evidence of the passage describing the *śāntiyudaka*, Vait. 5. 10: *uśasi śāntiyudakam karoti cītyādibhīr ātharvaṇibhīh kapurvīparvā odākkāvṛkkāvatīnadānīrdahanībhīr āngirasibhīh ca*. This is the only passage in the Vaitāna which Garbe finds himself unable to translate. It becomes clear enough in the light of the *paribhāṣa-sūtra*, Kāuṇ. 8. 16: *cīti- prāyaścīti- camī- camaka- savaṇṇa- śamyavāka- talāṇa- palāṇa- vāṇa- śiṇṇa- śimbala- sipuna- darbha- 'pamargā- 'kṛtīloṣṭa- valmīkavapa- dūvāprānta- vrthi- yavaḥ śāntak*. This is a list of articles, largely plants, which are considered as holy, and are therefore employed in the preparation of the *śāntiyudaka*. The passage from the Vaitāna is to be translated: 'In the morning he prepares the holy water with *ātharvaṇa*-substances *cīti* etc., and with *āngirasa*-substances *kapus* etc.' We may perhaps expect to find an explanation of these *āngirasa*-substances in the *āngirasa-kalpa*, if this ever turns up. In this case it becomes especially clear that the Vaitāna, in abbreviating the first list which occurs in the Kāuṇika, and in giving in full the second list which does not occur in the Kāuṇika, confesses itself as directly dependent upon and later than the Kāuṇika.

We have finally a technical proof. Both texts follow the usual practice of citing the hymns belonging to the canon of their own school by their *pratīkas*. The Kāuṇika moreover follows the custom current in *sūtra*-texts of giving in full any hymns or formulae which come from another *śākhā* of the same Veda (e. g. the Kaṇva-*śākhā* in chapters 72, 91, 107, 115), as well as those from another Veda. The Vaitāna in general, though not always, follows the same practice; one exception is especially noticeable: any hymn or formula which occurs in the Kāuṇika is cited by its *pratīka* only; it matters not whether the hymn in question occurs also in some other *sāṃhitā*, or is—as seems often the case—the special property of the Kāuṇika, not to be traced in any of the published *sāṃhitās*. So TS. iii. 2. 4. 4 has the formula *āhe dāidhisavyo 'd atas tisthā 'nyasya sadane sīdā yo 'smat pakatarah*. This is cited in full in Kāty. Cr. ii. 1. 22 and Kāuṇ. 3. 5; Vait. 1. 20 cites only the *pratīka āhe dāidhisavya*. The Kāuṇika, at 6. 11, has a mantra which Dārila designates as *kalpajā*, and which I have not been able to trace to any *sāṃhitā*: *vi muñcāmi brahmaṇā jātavedasam agnīm hotāram ajaram rathasmṛtam* etc.; Vait. 24. 7 cites only the *pratīka vi muñcāmi*.

11. On the use of the Word 'asah in the Bible, by Mr. Cyrus Adler, Johns Hopkins University, Baltimore.

The word עָשָׂה, one of the commonest in the Bible, has been defined by Gesenius, and the lexicographers generally, as follows: 1. to work, to labor; 2. to make, to do, to produce by labor.

The second meaning is specialized as follows: a. to make, i. e. build or manufacture; b. to create, as used of God; c. to produce or yield, as does the earth; d. to get by labor, to acquire; e. (at this point the development of meaning is not so clear) to make ready, to prepare; f. to dress or prepare, and so, to sacrifice; g. to keep any stated day, to hold or celebrate.

To this list we would add the meanings 'to worship' and 'to devote.' The Bible translators have been averse to using even those meanings which had already been made out, and by using *do* or *make* have often obscured the sense. Thus in Gen. xiii. 4, the authorized version reads, 'Unto the place of the altar which he made there at first.' Here עָשָׂה means 'where,' and עָשָׂה, 'sacrificed,' and the passage, if עָשָׂה really means 'place,' should read, 'Unto the place of the altar where he had sacrificed at first.'

In the same book we find the phrase עָשָׂה מִשְׁחָה occurring frequently: thus, xix. 3, xl. 20, xxi. 8, xxvi. 30. In fact מִשְׁחָה, 'feast,' is combined regularly only

with the verb *עשה*, save in one or two narrative passages, where *יהוה* is used. It will easily be seen how the association of *עשה* with *משתה* would tend to develop that meaning of 'celebration,' and more especially of 'joyous celebration,' which we find attached to it.

The word is essentially a *vox media*, and so sometimes the association is in the other direction. Thus the passage at Gen. i. 10, usually rendered, 'He made, *ויעש*, a mourning for his father seven days,' means of course simply that he observed rites of mourning. Exodus i. 21 shows a very peculiar usage of the word. In x. 25 and xii. 28, it plainly means 'to sacrifice.'

In Exodus xii. 47, *ישראל יעשו אתו* refers to the paschal lamb, and yet the English version has, 'All the congregat. on of Israel shall keep it.'

The next verse, *וכי יגור אתך נר ועשה פסח ליהוה המול לו כל-זכר ואז יסרב לעלותו*, is translated, 'And when a stranger shall sojourn with thee, and will keep the passover to the Lord, let all the males be circumcised, and let them come near to keep it.' 'Sacrifice' should be substituted for 'keep' in both places, and 'paschal lamb' for 'passover.'

Exodus xx. 23, *לא תעשון אתי אלה כסף וארד זהב לא תעשו לכם*, is a passage which has been constantly misunderstood. The English version reads, 'Ye shall not make with me gods of silver neither shall ye make unto you gods of gold,' and the Septuagint and Vulgate agree. Luther solved the difficulty by rendering, 'Darum sollt ihr nichts neben mir machen, silberne und goldene götter sollt ihr nicht machen.' It should probably be, 'Ye shall not worship alongside of me gods of silver,' etc.

Exodus xxxi. 16 furnishes an undoubted instance of the use of *עשה* in the meaning 'to celebrate.' *ושמרו בני-ישראל את השבת לעשות את השבת לדורם ברת עולם*. In the English version: 'Wherefore the children of Israel shall keep the Sabbath to observe the Sabbath throughout their generations for a perpetual covenant.' It really means, 'And the children of Israel shall watch, i. e. take care, or observe the Sabbath to celebrate the Sabbath, a perpetual covenant for their generations.'

Exodus xxxii. 35,

וינף יהוה את העם על אשר עשו את העגל אשר עשה אהרן

means, 'And the Lord plagued the people because they worshipped the calf which Aaron made,' though commentators have alike misunderstood it.

In Leviticus xvi. 34 there is an error in Luther's translation. The passage *ויעש כאשר צוה יהוה את משה* (of the priest), he renders: 'Und Moses that wie ihm der Herr geboten hatte.' The Septuagint and Vulgate are both correct, and the error is certainly curious.

Judges xviii. 31,

ושימו להם את-פסל מיכה אשר עשה כל מי היות בית האלהים בשילה

is translated, 'And they set them up Micah's graven image which he made all the time that the house of God was in Shiloh.' This however conveys very little meaning; 'worshipped' would be a much better translation than 'made.'

II. Samuel viii. 13 is a passage which has not been clearly made out.

ויעש דוד ים כשכו כדכחו את אים בגיא מלח שמונה עשר אלף

'And David made a name (grew famous) on his return from smiting Syria in the valley of Melah, eighteen thousand (men).' This sentence is to say the least not very clear. The two preceding give an account of the booty sanctified by David to the Lord. Now in the thirteenth verse (which as it stands makes no sense), if we change the vocalization *ים* to *שם*, the rendering will be, 'And David got

there on his return from smiting Syria in the valley of Melah, eighteen thousand men.' After this, the fourteenth verse comes in naturally enough, 'And he put garrisons in Edom; throughout all Edom put he garrisons,' etc.

In II. Kings xxiii. 4 occurs the phrase *העשויים לבעל*. This is rendered, 'which were made for Baal'; but it is much more likely, not that the vessels were made expressly for Baal, but that they were used in his worship, were devoted to it. Similar passages are II. Chronicles xxiv. 7 and Hosea ii. 10.

To summarize, the word *עשה* is used in the sense 'to celebrate' in about

twenty-five passages: Gen. i. 10 (?); Ex. xxxi. 16, xxxiv. 22; Deut. v. 15, xvi. 1, 10; I. Kings xii. 32. II. Kings xxiii. 21, 22; Ezra iii. 4, vi. 19, 22; Neh. viii. 15, 18; Esther ix. 22; II. Chron. vii. 8, 9; xxx. 1, 2, 3, 13; xxxv. 18, 19. It thus appears that such a shade of meaning became attached to *नम्य* that the word could be appropriately used with 'feast' or 'banquet,' with 'sabbath' or 'festival' ('celebrate'), and with *नमस्कृत्य* ('dedicate' or 'worship').

12. On the Typographical Requirements for printing Sanskrit in Transliteration, by Prof. C. R. Lanman, of Cambridge, Mass.

At the October meeting of the Society in 1880, Professor Whitney presented a paper on the Transliteration of Sanskrit. In this paper he explained and gave reasons for the system of transliteration which he himself had adopted. This system is substantially the one that he has used in almost all of his publications which called for it, and is precisely the one which is employed in his Sanskrit Grammar (1879). The fact that this system has been followed in a work of such a character, and of so wide circulation among Sanskrit scholars—both learners and investigators—in Europe and America, is to my mind a good and sufficient reason for its adoption by all Sanskrit scholars in America. It is open to as few theoretical objections as any system yet proposed, and perhaps to fewer; while practically it involves the greatest economy of diacritical marks, and so makes the cleanest and clearest printed page of Sanskrit which is attainable. Its more important features are: the use of a macron to mark a long vowel, of the acute sign to mark the acute accent, and of the so-called grave accent to mark the circumflex; the use of a subscript dot with the lingual vowel and sibilant (*r, s*), and with *l*; and the use of *c, j, y*, and *ç* for the palatals. Its economy and simplicity is apparent from the fact that for the 33 consonants (25 mutes, 4 semivowels, and 4 spirants) only five characters not found in ordinary English fonts of type are necessary.

The time is now come or is soon coming when it will be found desirable or necessary to print Sanskrit in transliteration in a good many different places in this country. The offices of the Journal of our Society, of the American Journal of Philology, and of a single Boston firm are the only ones that I know of which are equipped for this work. For the Philological Association, for the publishers of various philological text-books, and even for the humbler necessities of printed Sanskrit examination papers, Sanskrit "sorts" are desirable. In each case when the scholar brings his copy to the office, the practical printer will ask what "sorts" or "accents" are required to put the manuscript into type. It is a matter of considerable trouble and care to make the correct answer. On the one hand, the printer is unwilling to go to needless expense in providing sorts for which there will be no use; and, on the other, the author should not be put to an unfair expense for corrections caused by the lack of the needful sorts. I have accordingly made the following table on the assumption that Whitney's system will be used, and although its purpose is wholly practical rather than scientific, I believe it will prove of sufficient convenience and value to be worthy of preservation in the Proceedings of this Society.

It is safe to presuppose the existence of a *c* with the cedilla and of an *n* with the *tilde* in most American fonts of English type in good offices for book-work. It remains to show what needed characters are not provided for in such fonts. A glance at the alphabet

| | | | | | | | | | |
|------------|---|---|----|----|----|----|---|---|--------|
| Gutturals, | | k | kh | g | gh | ū | h | a | ā |
| Palatals, | ç | c | ch | j | jh | ñ | y | i | ī e ai |
| Linguals, | ś | ṣ | t | th | d | dh | ṇ | r | ṛ ṝ |
| Dentals, | s | | t | th | d | dh | n | l | |
| Labials, | | p | ph | b | bh | m | v | u | ū o au |

shows that *ç, t, d, ṇ*, and *ñ*, are the only types for consonants that need to be made anew. The ordinary book-fonts make provision for all of the diphthongs and vowels except *r, ṛ, and ḷ*. Long *ḷ* never occurs. Short *ḷ* and long *ṛ* are so infrequent that they may be left to the compositor to make by setting the proper marks above or below a shaved letter. But in case an extensive work is to be printed, it is better to provide these letters. On the score of the vowels, there-

fore, we must add \ddot{r} ; and for *visarga* and the *anusvara*-signs, we must add \dot{h} , and \dot{n} and \dot{m} . It is sometimes desirable to print the Sanskrit words in a heavy or full-faced type, and for this purpose a "job-font" rather than a "book-font" may be employed. In such cases, the author should assure himself that it contains \ddot{a} , \ddot{i} , and \ddot{u} , or else have them provided, as they are of very frequent occurrence. For printing unaccented or classical Sanskrit, accordingly, the following eleven or nine sorts are needed:

1. \dot{d} , \dot{h} , \dot{g} , \ddot{r} , \dot{s} , \dot{t} ; \ddot{n} , \dot{n} , \dot{m} [\ddot{r} , \dot{f}].

If, in the second place, it is desired to print accented (i. e. Vedic) words or texts we shall need one more consonant, \dot{l} , and quite an extension of our vowel resources. There are five vowels. Each may be with or without a macron.- And each may be without an accent, or with an acute accent, or with a circumflex ("grave") accent. Thus:

| | | | | | |
|----|----|----|----|-----|-----|
| a | á | ä | ā | ā' | ā̃ |
| i | í | î | ī | ī' | ī̃ |
| u | ú | û | ū | ū' | ū̃ |
| ṛ | ṛ' | ṛ̃ | ṝ | ṝ' | ṝ̃ |
| ṝ | | | | | |
| e | é | ê | ai | ái | aĩ |
| o | ó | ô | au | áu | aũ |

For a theoretically complete printer's case of the Sanskrit vowels, therefore, we should need ($5 \times 2 \times 3 =$) thirty boxes. We should add six more for the two *gupa*-diphthongs, e and o . The six varieties of the two *vrddhi*-diphthongs, ai and au , can all be made by setting together simple vowels, so we leave them out of the question. Practically, however, the number of thirty-six is reduced to thirty-one by the fact that no long or accented \dot{f} -vowel (i. e. only simple \dot{f}) is ever needed, and farther to thirty, because a long circumflexed \ddot{r} never occurs.

Leaving out of account the \dot{r} - and \dot{f} -vowels, lines 4 and 5, all the letters in the first four columns may be expected to be found in a good book-font. In the fifth column, three new sorts will be needed for \dot{a}' , \dot{i}' , and \dot{u}' , acute long, and in the sixth, one for \ddot{a} , circumflex long. Circumflex long \ddot{i} and \ddot{u} sometimes occur, but can be made with a "grave accent" on a separate piece of metal, set beside the vowel.

Of the \dot{r} - and \dot{f} -vowels, lines 4 and 5, three are already provided for above, under § 1, namely \ddot{r} [\ddot{r} , and \dot{f}]. Acute short \dot{r}' is so common that it ought to be provided; but \dot{r} and \dot{f}' are so rare as to be quite dispensable, and, in case they should be needed, can be made by setting a "grave accent" or else a "minute-mark" on a separate piece of metal beside the vowel. For printing accented Sanskrit texts, accordingly, there are needed:

2. \dot{a}' , \dot{i}' , \dot{u}' ; \ddot{a} ; \dot{r}' ; \dot{l} .

That is, there are needed in all 17 new letters, or, not counting \ddot{r} and \dot{f} , 15. It may be well to add that it is unnecessary for the type-founder to cut new dies, even for these; the matrices from which they are to be cast can be made with great ease by electrolysis, since all the diacritical marks are simple dots and straight lines, which can be put in juxtaposition to the body of the letter before electrolysis of the matrix. Such matrices cost only \$1.50 or \$2 a piece, so that a complete equipment of Sanskrit sorts made on Roman letters may be had for twenty-five or thirty dollars. If the sorts are made both in Roman and Italic, the cost will be rather more than doubled; but this is not necessary, except for printing extensive works of mixed Sanskrit and English; for the effect of Italics can be produced by hair-spacing the Roman. Unless both Roman and Italics are used, it is better to make Roman the basis of the sorts.

Finally, the author should assure himself that the font he proposes to use really contains, in addition to the \dot{a} , \dot{i} , \dot{u} , mentioned above, the acute \dot{a} , \dot{i} , \dot{u} , \dot{e} , and \dot{o} , and the circumflex \ddot{a} , \ddot{i} , \ddot{u} , \ddot{e} , and \ddot{o} . These ought to be contained in a book-font, but may be lacking in an otherwise more desirable job-font.

13. On the Meaning of Baalim and Ashtaroth in the Old Testament, by Mr. A. L. Frothingham, Jr.

The theory most in vogue concerning the meaning of Baalim and Ashtaroth, the plural forms in the Old Testament of the divinities Baal and Ashtoreth, is that these forms do not signify the divinities themselves, but their representations or images. Since its principal advocate, Gesenius, it has been adopted by the majority of critics. An examination of the passages in the books of the Old Testament where these words occur seems to show conclusively that the Gesenius image-theory is not only unnecessary but untenable, and that Baalim and Ashtaroth must signify either the various aspects of Baal and Astarte or false divinities in general. The questionable passage, Hosea xi. 2, must be compared to Hosea ii. 13 and 17. So also in II. Chron. xxiv. 7, the words '*asû le-Baalim*' must not be translated 'made into Baalim' but 'consecrated to Baalim' (cf. II. Kings xxiii. 4 etc.). Judges viii. 33 shows that Baalim was a general term, one of whose specifications was Baal-Berith; while the tenth chapter evidently points to a use of Baalim and Ashtaroth as general terms for the false male and female divinities of the surrounding nations.

There are fewer indications for Ashtaroth, and here we must seek help from the inscriptions. That among the Canaanites and Phœnicians Astarte was a common name is shown by the inscriptions of king Mesha, of Eshmunazar, and others; we find an Ashtarte of the Baal of Sidon, an Ashtar of Chemosh, an 'Attar of 'Ate, etc. In Assyrian, Ishtar was originally the common name for 'Goddess,' as *Ilu* was that for 'God'; later the plural form only was used in that sense. When Ishtar became a concrete goddess, her various attributes were worshiped separately and in different centres; thus arose Ishtar of Arbela, Ishtar of Asshur and of Nineveh, Ishtar of Erech, Ishtar of Agadê, etc. In regard to Baal as the supreme and single divinity among Hamitic nations, it is not necessary to adduce the proofs for such a fact, as they are obvious; a glance at the various individualizations of Baal in the Old Testament and in the Phœnician, Palmyrene, and other inscriptions is of itself convincing.

14. On the Etymology of the Sanskrit noun *vratá*, by Prof. Whitney.

As to the derivation of the common Sanskrit noun *vratá* (meaning in the classical language oftenest 'a sacred act' or 'vow'), and as to the way in which it arrives at its variety of senses, there exists considerable difference of opinion among scholars. The Petersburg lexicon makes it come from $\sqrt{2}$ *vr*, 'choose,' and draws out its scheme of values as follows: "1. will, command, law, prescribed order; 2. subservience, obedience, service; 3. domain; 4. order, regulated succession, realm; 5. calling, office, customary activity, action, carrying on, custom, etc.; 6. religious duty, worship, obligation; 7. any undertaken religious or ascetic performance or observance, rule, vow, sacred work; 8. vow in general, fixed purpose;" and then certain specialized uses. Grassmann's treatment of the word (in his *Rig-Veda* dictionary) is essentially the same. Benfey, making the derivation from the same root, starts with the meaning "a (self-chosen) voluntary act, rule," and goes on to "action, doing," to "work," to "a devout act . . . a vowed observance, a vow," and then to the more specialized senses; here, it will be seen, the assumed fundamental signification is completely different from that of the other authorities already quoted. But F. M. Müller, in his so-called translation of the *Rig-Veda* (pp. 225-8), even takes *vratá* from another root, 1 *vr* 'protect,' and holds it to "have meant originally what is enclosed, protected, set apart," then "what is fenced off, what is determined, what is settled . . . law, ordinance," and then to have "come to mean sway or power, and the expression *vrate lava* signifies, at thy command, under thy auspices."

Since, now, two of these explanations must be wrong, it is not impossible that all the three may be so; certainly, it stands open to any one to criticise them all, and to suggest a new explanation.

We are justified. I think, in the first place, in simply setting aside Müller's etymology as unsatisfactory; it lacks any fair degree of plausibility, and is also incompletely carried out: how its author would connect the usual later meaning of the word with those laid down by him, does not appear.

Against the etymology of the two authorities first quoted is to be urged that (see their own dictionaries) the root 2 *vr* does not signify willing, command, pre-

scription, but only choice or preference; the idea of laying down the law, which runs through all their leading definitions, is by no means to be found in it. There is, to be sure, a certain relationship between 'choose' and 'command,' but it is not so close as to allow of simply substituting the latter for the former. Hence even if we admit the derivation from 2 *vr*, the Petersburg lexicon's scheme of definitions, as it now stands, must be pronounced unacceptable, and requiring to be recast. Nor does the transition from law and ordinance to action, through the sense of prescribed activity and accustomed action, seem an easy or natural one.

The objection of non-correspondence with the proper meaning of the root is avoided by Benfey, who virtually starts from the sense of 'chosen activity, selected course of action,' and then simply drops the idea of choice or selection in the following senses. No such meaning as the former is recognized by any of the other authorities who have discussed the word; and if one examines the references given by Benfey under it, he will find that no implication of choice is at all called for by them; in fact, this author's leading definition is an otiose addition to his system of meanings, and made only for the purpose of forcing a connection between the real senses of the word and its assumed etymology.

My own idea of the word corresponds nearly with Benfey's, save that I would get rid of the forced implication of choice or selection, by accepting a different etymology.

If we derive *vrata* from either root having the form *vr*, we have to recognize in it the suffix *ta*, which, except as making the passive participle, is of great rarity; in fact, the only analogue to *vrata* would be *māta* 'mortal,' from *mr* 'die,' and this would show a difference both of accent and of root-form. Notably easier as regards the external shape of the word would be a derivation from *√rt* 'proceed,' with suffix *a*; the form *vrata* instead of *varta* is exceptional, but need cause no great difficulty, especially as it finds support in *vraja*, *tradd*. The word *vrata*, then, from *rt* would mean something like a procedure, course, line of movement, course of action, then conduct or behavior. This would correspond to meaning 5 in the Petersburg lexicon scheme, and 2 and 3 in Benfey's scheme. Then the developments of meaning would be on the one hand to a habitual, established, usual, or approved course of action or line of conduct—a familiar transfer, as instanced by *guṇa* 'virtue,' *rūpa* 'beauty,' and the like; and, on the other hand, to a special act or series of acts or ceremonies of an obligatory character, imposed by morality or religion; and any other senses would be easily explained specializations of these. The whole sphere of significance of the word seems to me more naturally covered in this way than in any other. Even the phrase *vrata tva* (cf. which Grassmann makes a final separate head, as if in doubt as to how it shall be connected with the rest) seems not less readily explained as meaning 'in thy (established or approved) course, following thy lead or example,' than 'under thy control or protection,' or 'in thy service,' as suggested by the other authorities.

The leading sense of 'course of action or behavior' appears to me best to suit the great majority of the compounds with *vrata*, even in the Veda: e.g. *vivrata*, 'of discordant action,' *āparrata* 'of offish or rebellious conduct,' *anuvrata* 'of submissive behavior,' *śuciṁvrata* 'doing beauteous work,' *svavratī* 'of excellent conduct,' and so on. The commonest Rig-Veda compound, *dhṛtivrata*, admits of more than one interpretation, as from the leading or the developed sense.

There are passages here and there which appear to indicate a recognition of the etymological connection of *vrata* with root *rt*: such are *vām ānu vrata'ni vartate* (RV. i. 183.3), *ādityasya vratam anuparyāvarante* (AB. iii. 11). It would not, however, be proper to insist too much upon their importance, since they might possibly be accidental collocations, or artificial plays upon words. But the general character of the verbs used along with such a noun has a legitimate and important value as pointing to its fundamental sense. And the verbs which take *vrata* as object decidedly favor its interpretation as a word of motion. We do not find them to mean 'obey, submit to, accept,' and the like, but rather 'follow after, pursue, attach one's self to,' and so on (*i*, *anv-i*, *anu-car*, *anu-gā*, *anu-rt*, *sac*, etc.). Examples are: *yāsya vratām paśavo yānti śārve* (AV. vii. 40.1), *anu vratām carasi* (RV. iii. 61.1), *viṣṇe . . . vrata' padē 'ca saścire* (v. 67.3), *tāva . . . vratām agne sacanta* (vii. 5.4), *tām . . . rjāyāntam ānu vratām* (i. 136.5)—and many others might be quoted. The only notable exception is the root *mi* or *ml* (alone, or,

more frequently, with prefixes *a* or *pra*); and here the original meaning of the root is doubtful (its connection with Latin *minus* etc., usually accepted, is highly questionable), and the difficulty of explanation seems about as great with one understanding of *vrata* as with another.

If this account of *vrata* shall approve itself to acceptance, the hitherto assumed shade of meaning in sundry Vedic passages will be slightly modified, but their interpretation will not be essentially changed; since the matter involved is not so much the senses themselves of the word as their derivation and relation to one another.

In preparing this paper, the fact was overlooked that M. Bergaigne also, in his *Religion Védique* (iii. 212 ff), has treated of the history and use of the same word. He gives yet a fourth derivation, different from that of any of the three other authorities—making it come, indeed, like Müller, from the root *l vr*, but with the primary sense of 'guard, protection.' This appears not less unacceptable than the rest; and here, again, it may be said that M. Bergaigne's learned and acute discussion of the uses of the word does not at all necessarily repose upon its etymology as held by him, but only upon the prevalent senses of it, as to which all are agreed.

After passing a vote of thanks to the Trustees of the Johns Hopkins University for the use of their assembly-room, the Society adjourned to meet in Boston, May 6th, 1885.

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The Muntakhab-ut-Tawárikh, by Abd-ul-Qádir Bin Maluk Sháh. Translated by W. H. Lowe. Fasc. 1, 2.

The Sus'ruta Sanhita. Translated by Uday Chánd Dutt. Fasc. 1, 2.

The Tattva Chintámani. Edited by Papáda Kámákhyanátha Tarkaratna. Fasc. 1, 2.

The Sthavirávalícharita, or Paris'ishtaparvan, by Hemachandra. Edited by H. Jacobi. Fasc. 1, 2.

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cexxxiii

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The solution of the pyramid problem; or, Pyramid discoveries. By Robert Ballard. New York, 1882. 8°.

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ccxxxix

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